A SOCIOLOGICAL EXPLANATION OF VARIATIONS IN MARITAL COITAL FREQUENCY

By

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Denise Westbrook Donnelly

To my father,

James Edward Westbrook
(1921-1974)

And my sons,

Michael Keegan Donnelly
and
Nicholas Evan Donnelly

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Abstract of Dissertation Presented to the Graduate School of the University of Florida in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

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Using a sample of 5292 married persons from the National Survey of Families and Households, this study examined the sociological correlates of marital coital frequency. Two interrelated goals are met by this project. First, by organizing previous empirical literature under a sensitizing scheme, and using this synthesis to develop and test an empirical model, some findings of the previous literature are replicated, questions are raised regarding the validity of other findings, and current knowledge on marital sexual interaction is increased. Secondly, by examining those levels of coitus are substantially higher or lower than average, several important differences emerge, and the possibility of nonlinear relationships is suggested. The study concludes that current empirical literature is of limited value in explaining marital coital frequency, that a

more comprehensive conceptual framework is needed to explain this phenomenon, and that future research and theory must take the possibility of nonlinearity into account.

CHAPTER ONE
INTRODUCTION

All humans possess sexuality, yet most have only a vague comprehension of its origins, meanings and influence. The topic of sexuality is of enormous interest to most people, as the continuing popularity of Freud, Kinsey, and the large number of current popular and scientific studies attest. While the topic of sexuality may excite considerable interest and activity, research on sexuality lacks clear, consistent, and generalizable findings, especially in the social sciences. Even marital sexuality, which is the most widely sanctioned form of sexuality, is an area where more questions than answers exist.

The Problem: An Overview

Sociologists have examined the influence of several types of variables on marital sexuality. These include demographic, attitudinal, interactional, normative, and durational variables. But there are still gaps in sociological knowledge about marital sexuality. For example, while both the biological and popular literatures have explored sexuality in some detail, some sociologists have been reluctant to investigate this topic, and those that have have not investigated it very thoroughly.

Existing sociological research leaves many questions unanswered, many areas untouched. Most theories of sexuality tend to be problematic as well, focusing on undimensional, narrow perspectives to the exclusion of broader, more explanatory frameworks (see Stein, 1989 for an exception). In sum, while there is a need to explore the topic of marital sexuality sociologically, most previous attempts have been less than successful.

It is beyond the scope of a single author, or a single work, to correct these problems. The current project, however, focuses on martial coital frequency and begins to address this deficit by organizing and synthesizing past empirical findings on one type of interaction within a conceptual framework dealing to explain interaction in general. Using a nationwide sample of married persons, an empirical model suggested by this synthesis is tested. Coital frequency is chosen as the focus of this study since it is one of the most basic, and often misunderstood, forms of marital interaction.

Variations in frequency of martial intercourse affect such factors as marital happiness and stability (Scanzoni and Marsiglio, 1990; Tavris and Sadd, 1977), extramarital involvement (Edwards and Booth, 1976), likelihood of divorce (Levinger, 1979), and fertility (Jasso, 1985). Some of these authors even suggest that coital frequency is a good indication of the overall quality or health of the marriage

(see Blumstein and Schwartz, 1983 for a discussion of this). Thus, the importance of this research should not be understated.

While some would argue that it is not the legal bond, but the sexual bond which holds couples together (Scanzoni et al., 1988), married persons were chosen as the focus of this research. Several reasons exist for focusing on marrieds rather than including cohabitors or sexual partners not living together. First, the marriage relationship tends to be longer lasting than non-legal relationships. Stronger expectations of permanence are attached to married persons than to cohabitors or sexual partners not living together (Glick and Spanier, 1981). Secondly, marriage is still the only legal relationship in which sex is sanctioned, although admittedly, this is changing somewhat (Weitzman, 1981). Finally, most persons in this country have either been married, are currently married, or intend to marry some day (Bane, 1976; Cherlin, 1981). Thus marriage is a common experience for most of us.

Because sexual relationships in other contexts may be qualitatively different from marital sexuality, this study was limited to only married persons. This is not to discount the importance of understanding sexual interaction in other types of relationships, but simply to make the present study more manageable. The logic employed here is that until we can understand sexual interaction in one type

of relationship, it makes little sense to compare it to other types of relationships.

One reason that no "definitive" work on marital sexuality exists is because the context of marital sexuality is constantly changing. Sexuality in a marriage of the 1990's has little in common with sexuality in the Victorian era, sexuality in the first part of this century, or even the sexuality that our grandparents experienced in their marriages. In the next section, some of the changes in marital sexuality that have occurred over the years are briefly reviewed in order to set the stage for this analysis.

Changes in Marital Sexuality

Sociologists who study marital sexuality (Gagnon, 1977; Stone, 1985), point out that sexuality is a product of the cultural and historical context in which it occurs. Norms regarding sexuality vary widely depending on the time and place in question. They note that sexual norms have not been linear through history, going from repressive to permissive, but rather that norms regarding sexuality are cyclical, swinging from restrictive, to expressive, to somewhere in the middle.

For example, in ancient Greek and Roman cultures, there was a focus on sensate pleasure, especially the sexual. This focus was not limited, however, to the marital bed. In

fact, sex was rather a symbol of power. Powerful persons (or in other words, adult male property owners) were allowed, and even expected to have sex with the less powerful (young men, slaves, concubines, and wives). This is in sharp contrast to the Middle Ages in which sex of all forms was condemned. Marital sex was frowned upon, except when practiced for procreation, and to feel passion, lust, or love for one's spouse was considered shameful. There were exceptions to this prohibition, however, and men were typically given much more sexual freedom than women.

In our country, the Victorian era marked one of the most sexually repressive atmospheres in our history. The Victorians considered sex shameful--it threatened the moral character and drained one of his or her vital energies. Women were not supposed to enjoy sex, rather it was their "duty" to satisfy their husbands. The focus of marital sexuality was on procreation, and its basis was obligation to one's spouse. Little emphasis was placed on sexual pleasure. Again, however, men were allowed more freedom than women. While men were expected to give in to their sexual pleasures, and stray from the marital bed occasionally, women were not even supposed to show emotion there. In fact, if a woman expressed desire or pleasure in the sexual act, she was likely to be considered wanton or sinful.

Two themes quickly emerge here. One is that a double standard has existed through history. Both societal and individual expectations have differed greatly for males and females. The other is that historically, sexual pleasure has been reserved for those in power. This element has not always been recognized by sexuality theorists who have tended to focus on drive, interaction, and agency to the exclusion of issues such as power and control (Stein, 1989).

Expectations for marital sexuality have been rather cyclical in our century as well. The century started under stifling Victorian norms. This changed, however, starting with the work of Freud (1905). By focusing on sexuality as a basic motive or drive, Freud refocused attention on humans as sexual beings. Sexuality became less "taboo", and some persons began to regard the sexual urge as a natural biological function. Vestiges of the Victorian era remained, however. While sex might be regarded as a drive, it was still something that was supposed to occur only in marriage, and was not a "fit" subject for public discussion.

Ideas on sexuality loosened somewhat as urbanization, the automobile and the early women's movement of the 1920's caught on, but it was not until the late 1940's and early 1950's, that the work of Kinsey further challenged our views on sexuality. Kinsey (1948, 1953) introduced the scientific study of human sexuality. While his book on the human male received a coot reception at first, by the time his work on

the female was published in 1953, it was widely read and received. As a nation, we were becoming more open about our sexuality. The Kinsey studies, to some extent, made sex acceptable, both by studying it scientifically, and by reassuring the readers that many of the sexual behaviors that they had feelings of guilt about were in fact practiced by many other Americans.

Through the fifties and sixties, the subject of sexuality became more acceptable. Drastic change did not occur until sexual revolution of the late sixties and early seventies, however. The sexual revolution was the culmination of several changes that had taken place over the years. First, as pointed out earlier, our attitudes about sex were changing, and becoming less restrictive. Another change was demographic. In this century especially, we began living longer and having fewer children. The focus on sex as solely a procreative tool was lessened. Finally, and probably most importantly, with the advent of reliable methods of contraception, we were able to control reproduction, and pleasurable sex, without risk of pregnancy, became possible. These changes were greatest for women. For the first time in history, women could control reproduction. Societal changes occurred that empowered women as never before. Changing gender role norms gave women more power, not just in marriage, but in society as well.

With the sexual revolution came an emphasis on sex as pleasurable, and alternatives to sexuality restricted to marriage began to appear. Women especially, had the freedom to exercise their sexuality as never before. In the seventies, some writers even suspected that marriage, in itself, was a dying institution (Etzioni, 1977). The institution was only changing, however. While the interactions that make up marriage may have changed drastically, most people today still marry at least once (Glick, 1984).

By the 1980's it was obvious that the emphasis on sexuality solely as pleasure was being replaced with caution. First with herpes, and later with the AIDS epidemic, the emphasis shifted back toward, if not marital sex, at least monogamous sex.

As we enter the nineties, what impact does all this have upon marital sexuality? First, females have attained more power than ever before. Women have moved toward equity not only in the bedroom, but in their marriages, and in society as well. Moreover, both partners expect the sexual aspects of marriage to be satisfying. In today's marriage there is a focus upon romantic love, marital interaction, and sexual pleasure as never before. And finally, as a society, we have become more open about our sexuality, more willing to discuss what goes on in our private lives.

Thus, the need for research such as the type done here is great. With all the changes in society, and in our expectations of marriage and marital sexuality, one goal of the current study is to simply describe the state of marital sexuality at the present time. For example, some of the issues examined later include the effect of attitudes about such topics as gender roles, individualism, and self worth upon marital coital frequency, the relationship between satisfaction with marital interaction and marital sexuality, the effects of societal norms upon the sexuality of married couples, and an examination of the characteristics of persons whose marital coital frequency differs from average.

Plan of Research

The purpose of this project is both to replicate past work and to add to the knowledge of marital sexuality by examining persons who exhibit levels of coital frequency either significantly higher or lower than average. The first step is to organize existing findings under some conceptual scheme, and to develop testable hypotheses. More specifically, Jonathan Turner's theory of social interaction is used as a sensitizing scheme for organizing and synthesizing existing research. On this basis, testable hypotheses emerge. These hypotheses are tested in two ways. First, as others (Bell and Bell, 1972; Berkey, 1972; Doddridge, 1987; Greenblat, 1983; Jasso, 1985) have done, I

examine the empirical correlates of marital coital frequency. This replication adds to their work by developing and testing an empirical model derived from a synthesis of previous research. The investigation extends the literature by focusing on those persons whose rates of marital intercourse deviate greatly from the norm. This includes both marriages where the levels of intercourse are very low (or non-existent), and those where the levels are extremely high. Because of the difficulty in obtaining information about such marriages, and because many assume these marriages to be quite rare, little theory and research regarding them exists. This research is important, however, because most researchers have assumed that the relationship between marital coital frequency and its correlates is linear, when in fact, as will be shown later, it is not. Researchers have also assumed that the same predictors of coital frequency operate for all levels of coitus. This assumption is likewise open to criticism. Thus, there is a real need to examine not only marriages in which levels of marital coitus are close to average, but those which deviate from average levels as well.

Chapter Two surveys the literature on marital coital frequency. After a brief introduction, the current findings on the effects of demographic, interpersonal, intrapersonal, normative, and durational variables on marital coital frequency are reviewed. The chapter ends with a short

review of the literature on marriages with nonnormative levels of marital coital frequency.

After reviewing the literature, a conceptual framework based upon a synthesis of previous findings is developed in chapter three. By working back and forth between this framework, current theory, and an analytic (pictorial) model, a set of hypotheses regarding marital coital frequency is developed.

The hypotheses developed in Chapter Three are tested using the methodology presented in Chapter Four. The chapter begins with a description of the National Survey of Families and Households, the variables contained within it, and justifications for its use in the current study. The next section contains descriptive statistics for the sample of 5292 married persons used in this analysis. Methodology for testing the theoretical model is then presented. Simultaneous equations are estimated during the structural portion of LISREL in order to determine the predictors of marital coital frequency for the entire group. Multiple regression, logistic regression, and discriminant analysis are used to determine if the predictors of coital frequency for those persons with high or low frequencies are different from those with average levels of marital intercourse.

The findings on the correlates of marital coital frequency are presented in Chapter Five. Chapter Six contains the results of the analysis done to determine if

the predictors behave differently for those at nonnormative coital frequencies than for those at normative levels. Both chapters conclude with discussions of the findings.

The implications of the study are presented in Chapter Seven. The main focus is how the findings relate back and add to previous research. The utility of the conceptual framework presented here is evaluated, and directions for future research are suggested.

CHAPTER TWO
REVIEW OF THE LITERATURE

Research On Marital Coital Frequency

As mentioned earlier, research on marital coital frequency is plagued by several problems. For example, while still of great interest, much of the research was conducted prior to the 1970's (Kinsey, 1948 and 1953; Ehrman, 1967; Berkey, 1972; Westoff and Westoff, 1971). Since many of the classic studies took place before the full effects of the sexual revolution and the women's movement were felt, they may not be especially relevant for today's married couples. In addition, many studies of marital sexuality may not be generalizable or representative of the population at large because of sampling problems. Some were based on magazine surveys which asked readers to respond (Hunt, 1974; Tavris and Sadd, 1977), thus opening them to the problem of self selection. Others were based on small populations (Udry, 1980; Westoff, 1974), or homogenous groups, such as persons in a single town (Greenblat, 1983), church attendees (Doddridge, 1987), or military personnel and dependents (Bean et al., 1980). Still others focus on certain groups of interest such as employed women (Bell and Bell, 1972). Some studies may not be applicable to American

couples since they were based upon foreign populations (Edwards and Booth, 1976; Reading and Weist, 1984). With such a diversity of samples and sampling procedures, findings often conflict, or at best are not comparable. Keeping these problems in mind, the key variables used in this body of research are examined below.

Time

One relatively consistent finding is that coital frequency declines over time. Researchers have pointed out that coital frequency falls over the duration of the marriage (Blumstein and Schwartz, 1983; Doddridge, 1987; Greenblat, 1983; Jasso, 1985; Mancini and Orthner, 1978; Williams, 1980), as persons age (Bell and Bell, 1972; Doddridge, 1987; Greenblat, 1983; Jasso, 1985; Kinsey, 1948), and as a function of the cohort effect, with those belonging to earlier cohorts having sex less frequently (Greenblat, 1983; Jasso, 1985; Kinsey, 1953). There are several reasons for these declines. Durational declines may be attributed to the fact that familiarity with one's sex partner and boredom with marital sex tend to increase over time and thus to cause coital frequency to drop (Blumstein and Schwartz, 1983; Doddridge, 1987). Pressures such as children, jobs, commuting, housework, and finances, occur as marriages progress and act to reduce the degree of sexual interaction that a couple experiences (Greenblat, 1983). Age

related declines are usually attributed to physical reasons, but in reality, are probably a combination of both physical and social influences. Other older persons in our society are not pressured, or even expected to have, societal norms may cause their rates to slow. Finally, cohort effects may also cause declines in coital rates. That is, persons born in more restrictive eras may feel that sex should be linked to procreation, and once they pass these years, may decide to curtail or end marital intercourse. The effects of these variables are difficult to separate out statistically, however, since each is highly correlated with the other and since in data analyses, they tend to form linearly dependent combinations (Jasso, 1985).

Few researchers have dealt effectively with the confounding effects of time. Jasso (1985), however, attempted to separate out the effects of age, length of marriage, cohort, and period influences on marital coital frequency. Using a fixed-effects model, she discovered that coital frequency does indeed decrease with marital duration, that more recent cohorts have more marital sexual activity, and that there is actually a small positive relationship between wife's age and marital sexual frequency for women between the ages of 15 and 48. Her results also suggest that the negative effects of marital duration are actually smaller than previous studies have found because these studies did not control for the

confounding effects of age and cohort. Moreover, like Kinsey, Jasso found that the effects of spouse's age and marital duration on coital frequency are high during the first year of marriage but begins to fall by the second year. Coital frequency decreases to a minimum by two to three years into the marriage and then increases slightly until the sixth to tenth year when it begins to fall again.

Demographics

Since time alone does not explain differences in marital coital frequency, other factors should be examined. Demographic variables appear frequently in the literature, but their effects are not altogether clear. This doe not mean that demographic explanations should be abandoned, but that researchers should seek to clarify the relationships between these variables, other factors affecting marital intercourse rates, and marital coital frequency itself.

Research on demographic effects has produced conflicting results. For example, religious preference and church attendance have been utilized in various studies (Greenblat, 1983; Hunt, 1972; Edwards and Booth, 1976; Kinsey, 1948), but there is no agreement as to just how (or even if) they affect marital coital frequency. Roman Catholic religious affiliation was found by one group of researchers (Trussell and Westoff, 1980) to be a correlate of lowered coital frequency, while another group (Edwards

and Booth, 1976) found Roman Catholic persons to have higher rates of marital coital frequency than Protestants. Religious attendance has also been associated with lower coital rates. Kinsey (1948) found that Protestant males who attended religious services frequently had lower coital rates than males of other religions, but that no such relationship existed for women (1953), while Greenblat (1983) found that church attendance was associated with lowered coital frequency for both sexes. The reasons for these disparate findings probably lie in larger social changes that have been taking place over the last few decades. As social norms have changed, religious expectations have also changed, especially in the Catholic church. Ideologies regarding birth control, having children, and the place of sexuality in marriage have been, and to some extent remain, in a state of flux.

Contrary to popular stereotypes that persons with low socioeconomic status have sex more often, education and income generally have little effect on rates of marital intercourse (Doddridge, 1987; Edwards and Booth, 1976; Greenblat, 1983; Hunt, 1974; Kinsey, 1948 and 1953). Having children, on the other hand, tends to have a negative impact on marital coital rates, which is magnified as the number of children rises (Blumstein and Schwartz, 1983; Doddridge, 1987; Greenblat, 1983). This is especially true for couples with very young children. Age at marriage is also predictive

of coital frequency. Greenblat (1983) found that age at marriage is inversely related to coital frequency for women, while Udry (1980) found this effect for both sexes. Although given the findings on the effects of time and marital duration, one could argue that these lower rates occur because persons who marry younger have been married longer than their age peers.

Rural residence was negatively associated with coital frequency rates for men in the Kinsey study (1948). Trussell and Westoff (1980) found similar results, but Edwards and Booth (1976) found no relationship between the two. There is also limited evidence for a race/ethnicity effect. Edwards and Booth (1976) found that foreign born males tended to have lower marital coital rates than those born in North America, while Trussell and Westoff (1980) found that blacks had lower rates than whites. It must be noted, however, that no race/ethnicity differences were found in the other studies cited here.

While there is not much agreement over the impact of gender on coital rates, we do know that gender differences in sexual desire exist. Kinsey (1948 and 1953) and Ehrman (1967) found that at younger ages males desire sex more often than females. As couples age, however, male desire falls while female desire rises, so that by the time the couple reaches middle age, sexual desire is about equal. While biology certainly plays some role in this process, it

is also possible that by middle age couples have learned to accommodate each other sexually. In more recent studies, males were found to have greater sexual desire than females (Mehrabian and Stanton-Mohr, 1985) and to initiate sex more often than females (Blumstein and Schwartz, 1983). It is difficult, however, to determine if this is because of actual differences in desire or because of the still powerful influence of traditional gender role norms. There is some evidence of change. As Jasso (1985) points out, younger females have sex more often than older females. A question remains, however, as to whether this is because of aging per se, or because of changes in gender roles over the years (a cohort effect). Moreover, Blumstein and Schwartz (1983) note that younger males are less likely to resent the female initiating sex than older males, thus providing some support for the changing gender role hypothesis.

Various studies have also noted gender differences in the variables that predict coital frequency (Edwards and Booth, 1976; Doddridge, 1987; Greenblat, 1983; Jasso, 1985), but no consistent findings have emerged. As the above discussion shows, while it is clear that different factors affect coital frequency for males and females, it is not yet clear how these factors operate.

Marital Variables

While there is some disagreement over the association of demographic variables with marital coitus, most researchers agree that relationship and contextual variables are more important than demographics (Bell and Bell, 1972; Doddridge, 1987; Edwards and Booth, 1976; Greenblat, 1983). As the focus of marital sexuality has turned from duty and obligation to pleasure and fulfillment, couples have come to expect sexually satisfying marriages. Moreover, couples relationships outside the bedroom tend to greatly influence their relationships within the bedroom. Stable marriages in which partners consider themselves happy and satisfied are more likely to have high rates of intercourse than marriages characterized by friction and strain (Bell and Bell, 1972; Blumstein and Schwartz, 1983; Doddridge, 1987; Edwards and Booth, 1976; Greenblat, 1983; Trussell and Westoff, 1980). In all likelihood this relationship is not unidirectional. Friction and strain may cause declines in coitus, but low rates of intercourse may also cause friction and strain.

Along the same lines, marriages in which one or both partners had threatened to leave, and marriages in which partners have been previously separated, are more likely experience low coital frequency (Edwards and Booth, 1976). Even feelings of equity may influence levels of intercourse. Persons who feel that their relationships are fair and equitable are more satisfied with their sex lives, and have

sex more often, than those who feel that their marriages are inequitable (Hatfield et al., 1982). Content is also important. As mentioned earlier, the everyday demands of modern marriage--children, jobs, housework, and finances--intrude upon a couple's sex life, and act to reduce coital rates (Greenblat, 1983).

The importance of marital interaction quickly becomes apparent. As Blumstein and Schwartz (1983) point out, when nonsexual parts of marriage are going badly sex life usually suffers to some extent, and the reverse is true as well.

Attitudes and Beliefs

One's attitudes and beliefs about oneself, one's marriage, and life in general, may also have some bearing on coital frequency. For example, Scanzoni et al., (1989) found that persons with nontraditional gender role orientations and persons who value individualism tend to have lower coital frequencies. They also found that persons scoring higher on religiosity scales tend to value individualism less, to be more gender role traditional, and to have higher coital frequencies. Hunt (1974) found that females who scored higher on religiosity had lower coital rates, but found no such relationship for males. Conversely, Scanzoni et al., (1989) found religiosity to be predictive of higher levels of marital intercourse for both sexes. These differences may, however, be due to sampling and

methodological differences in the studies, and to the different time periods in which the studies were conducted.

Such individual attitudes and self worth, life satisfaction, personal happiness and overall feelings of well being have been linked to high rates of coital frequency (Masters and Johnson, 1970; Bell and Bell, 1972). Persons feeling good about themselves and about their lives tend to have higher levels of sexual interaction (Mehrabian and Stanton-Mohr, 1985). On the other hand, feelings of alienation and animosity are negatively associated with frequency of intercourse (Edwards and Booth, 1976).

Physiological Characteristics

Rates of marital coitus are also affected by physiological characteristics. Declines may be temporary because of pregnancy, recent childbirth, acute illness or injury (Greenblat, 1983), or they may be relatively permanent as in the case of chronic illness, handicaps, or impotency (Greenblat, 1983; Masters and Johnson, 1970). The use and effectiveness of birth control methods have also been linked to coital rates. Couples using highly effective contraceptives tend to enjoy significantly greater frequencies of marital intercourse (Bean et al., 1980; Doddridge, 1987; Greenblat, 1983; Trussell and Westoff, 1980; Westoff and Westoff, 1971). Fatigue is also cited as a cause of decline in marital intercourse (Blumstein and

Schwartz, 1983; Greenblat, 1983), but Berkey (1972) points out that fatigue may actually be the physical manifestation of a psychological or relationship problem.

As mentioned earlier, the assumption is often made that coital frequency declines with age because of physical problems. While it is true that desire seems to slow with age (Greenblat, 1983; Kinsey, 1948 and 1953; Tavris and Sadd, 1977), it is unclear whether this is physical, or because of our culture's restrictive attitudes toward sexuality in older persons, or both. While it is true that older persons have a larger percentage of physical problems than younger persons, there is no physical reason why healthy older persons should not desire and engage in sex (Brecher, 1984; Butler and Lewis, 1976; Masters and Johnson, 1966; Rossman, 1978; Starr and Weiner, 1982).

Feedback Relationships

The effects of the previously discussed variables upon marital sex are not always easy to determine, since in reality, feedback relationships probably exist. For example, low rates of marital coitus are associated with greater likelihood of divorce (Levinger, 1979), but the relationship probably operates in both directions. That is, persons might divorce because of unsatisfactory sex lives, but on the other hand, persons who have problems which precipitate a divorce may not have satisfactory sex lives.

Thus it becomes readily apparent that coital frequency is not shaped by a single influence, but by the combined, interactive and reciprocal influences of individual partners, their marital interaction, and the social and normative contexts in which their marriage exists.

Nonnormative Levels of Marital Coital Frequency

No research focusing specifically on marriages with either very low or very high levels of sexual intercourse was found. Some writers deal briefly with the absence (Zussman, 1983) or cessation of coitus (Ade-Ridder, 1985; Blumstein and Schwartz, 1983; Kinsey, 1953; Masters and Johnson, 1966), but most investigate this phenomenon in clinical terms. That is, they are interested in persons who have specific sexual dysfunctions, such as impotence or inhibited sexual desire. They ignore the possibility that low rates of coitus occur for other reasons as well. For example, the relatively high rates of marital rape evidenced in our society today (Finkelhor and Yllo, 1983; Russell, 1982), suggest that lack of coitus is attributable to factors other than sexual dysfunction. One possible interpretation of the widespread incidence of marital rape, is that when a marriage is in trouble partners cease to have sex, and this in some cases leads to the unwilling partner being forced to submit.

The assumption underlying previous work has been that the relationship between coital frequency and the factors associated with it is a linear one. The possibility that threshold effects exist, or that relationships take nonlinear forms has been ignored. It has also been assumed that the predictors of coitus are the same for all levels of activity. It is entirely possible, however, that there is some level of coital frequency (either high or low) at which factors predicting it differ from those affecting the mean.

One reason for the lack of research on above or below average levels of marital intercourse is the lack of a conceptual framework to explain variations in coital frequency. Without some way to organize the literature and to suggest why differences exist for those with average levels of coitus, it becomes extremely difficult to hypothesize about what happens as one approaches the extremes.

CHAPTER THREE
SETTING THE STAGE: A THEORETICAL FRAMEWORK

Introduction

Much of the research on marital coital frequency either lacks a theoretical framework entirely, or utilizes one of limited explanatory power. Theoretical frameworks dealing with sexuality have typically focused on one explanation of sexuality while almost totally excluding other, equally plausible explanations. For example, some theorists explain sexuality in terms of biological or psychological drives (Freud, 1905; Klein, 1976; Robinson, 1976; Weeks, 1985), while others (Beach, 1977; Davis, 1961; DeLameter, 1981; Parsons and Bales, 1955) try to explain sexuality as a drive constrained by social and cultural norms. Still others (Gagnon and Simon, 1987; Long and Hadden, 1985; Laws and Schwartz, 1977) posit that sexuality is the result of social interaction, and see sex as a negotiation between individuals. Only recently have attempts been made to utilize relevant elements from several diverse perspectives (DeLameter, 1981; Gagnon and Simon, 1987; Stein, 1989).

None of the existing theories offer a comprehensive explanation of marital sexuality. Stein (1989) points out that the various frameworks are not mutually exclusive, and

that each contains important explanatory principles. She calls for a convergence between the various perspectives, one which combines the motivational and biological emphases of the "drive" theorists, the structural and cultural explanations of the functionalists, and the individual and exchange foci of the interactionists. She suggests that human agency and interaction (micro processes) are best viewed within the constraints of the societal and cultural contexts (macro processes) in which they operate.

Indeed, there is a growing movement in the field of sociology as a whole to abandon narrow structuralist and interactionist conceptualizations of how the world works, and to synthesize elements from several diverse theoretical frameworks. Recent theorists, such as Randall Collins (1981) Anthony Giddens (1979 and 1981), Jonathan Turner (1988), and Ralph Turner (1985), have begun to utilize ideas from several theoretical frameworks, and some have developed theoretical explanations which recognize both macro and micro influences. While each of their theories has merit, I chose the work of Jonathan Turner as a starting point for this project. Turner's theory has the advantage of being logically organized, easy to understand, and easy to borrow from. Because of its clarity, it is extremely useful in organizing the empirical literature on sexuality. Moreover, while Turner's theoretical perspective deals with interaction in general, rather than marital or sexual

interaction in particular, most of the elements used in the study of marital sexuality can be subsumed under his general rubric. Thus, Turner's theory provides the starting point for organizing existing research and theory dealing with marital sexuality.

A Starting Point: Jonathan Turner's Theory of Social Interaction

An Overview of Turner's Theory

In his book, A Theory of Social Interaction (1988), Turner addresses the problems of previous studies by first making explicit his theory building strategy. He then uses this strategy to develop a theory of social interaction which includes relevant theoretical contributions from several schools. His theory building strategy focuses on four basic elements: 1) defining a generic property of the social universe, 2) constructing a broad sensitizing scheme to denote its fundamental elements, 3) developing analytic models to delineate operative processes for each element, and 4) articulating abstract laws that express the relations among operative processes.

In The Theory of Social Interaction, the generic property of interest is social interaction. Turner presents a sensitizing scheme drawn from the traditions of structuralist and functionalist theories as well as from exchange theory, ethnomethodology, symbolic interactionism,

dramaturgy, and interaction rituals. According to his scheme, the fundamental elements of social interaction are motivational, interactional, and structuring processes. Understanding each of these elements requires different theoretical models and principles. By motivational processes he means the forces that energize individuals and mobilize their interactions, or put differently, motivation is what causes persons to act in certain ways. By interactional processes, he refers to what people actually do when they influence each other's behavior, that is, how they determine a course of behavior and interpret their own and others behavioral signals. He uses the term "structuring" to denote the fact that social interaction is often repeated across time and space, and asks why and by what processes this occurs.

Turner then develops an analytic (or pictorial) model which delineates these processes, as shown in Figure 3-1. From this model, one can see that motivational processes

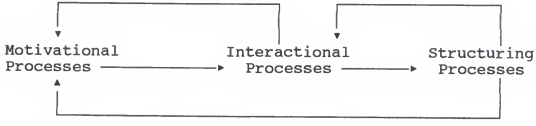


Figure 3-1: Turner's Model of Social Interaction

affect interactional processes, which in turn affect structuring processes. A feedback relationship exists between interactional processes and motivational processes. Feedback relationships also exist between structuring processes and both interactional and motivational processes. In other words, motivational processes affect interactions, but interacting with others may cause motivations to change. Structures develop out of interactions, but then may act to shape future interactions and motivations. From this analytic model, Turner develops abstract laws expressing the relations among the three processes.

By using this theory building strategy, Turner presents a somewhat comprehensive theory of interaction. His three broad aims are to analyze the process of interaction in terms of its structural elements, to find invariant properties which structure the process of social interaction, and to construct dynamic models dealing with the processes of interaction, rather than to construct static typologies. Since marital coitus is one type of interaction, Turner's theory proves useful in organizing existing sexuality theory and empirical findings. From this starting point, an analytic model of marital coital frequency can be developed and tested. While Turner's theory is strictly a micro theory, the will note that the framework developed here contains some macro elements.

Explicitly, the theoretical strategy employed here has two goals: the development of an abstract model identifying key variables affecting marital coital frequency, and the extraction of a tentative set of hypotheses incorporating these variables. Turner uses the term model to refer to "a pictorial representation of the causal connections among variables" (1986, p. 405). Thus, a model summarizes the relationships among several variables simultaneously. The term hypothesis refers to a statement of covariance. In other words, a hypothesis summarizes how variation in one phenomenon is affected by variation in one or more additional phenomenon. While complex causal relationships depicted in models are difficult to summarize in a hypothesis, this is a valuable exercise since a hypothesis takes a variable from the model and formally states its relationship to other variables in a way that facilitates empirical testing. In other words, models show the linkages between variables, and hypotheses describe the direction and operation of these linkages. Thus, my theoretical strategy will be to use Turner's framework to organize the empirical (and often a theoretical) findings on marital coital frequency, then to translate these findings into a pictorial model from which new hypotheses can be suggested and tested. The end product will be a tentative theory of frequency of marital intercourse. The aim here is not to test Turner's theory per se, but rather to use it as a sensitizing scheme

(Turner, 1986; Blumer, 1969) to suggest which variables or classes of variables might affect marital coital frequency.

Using Turner's Theory as an Organizational Scheme

Motivation. Turner notes that the initial step in interaction is motivation. That is, persons will not act (or interact) until they are energized or mobilized to do so. By motivation he means willingness to deposit energy in interaction with others. Turner recognizes that the issue of motivation is somewhat problematic in sociology, yet he also realizes the importance of dealing with it. He notes that motivation is a very broad process, including the biological, psychological, and the social psychological. For his purposes, however, he deals with motivation only as it affects the process of social interaction. Turner sees motivational energy as resulting from the buildup of anxiety caused by unmet needs. These unmet needs include needs for group inclusion, trust, ontological security, and confirmation/affirmation of self. According to Turner, much of what energizes interaction is the need to maintain self esteem and positive self attitudes, and to maintain consistency among attitudes about oneself. Whether or not the individual maintains an interaction, or renews and reproduces it at a later time (thereby adding structure to the interaction), depends on whether or not these needs are being met. In simple terms, actors are motivated by their need to maintain their self esteem and positive self

attitudes. These motivations in turn effect interaction, and repeated interactions give structure to future interactions.

Sexuality theory. Sexuality theorists are also interested in what motivates persons to interact, although in this instance the focus is sexual interaction. Early writers such as Freud (1905) operated under what Stein (1989) calls the "drive model". Libido (or sexual impulse) was seen as a strong, almost overpowering instinct or drive which caused individuals to try and find ways to meet their sexual needs. This viewpoint emphasized psychological and biological forces, while discounting the suggestion of interactional or societal influences upon sexuality (Klein, 1976). Like Turner, drive theorists (Robinson, 1976; Weeks, 1985) were interested in how unmet needs (for sexual fulfillment) energized individuals to act. Unlike Turner, however, they believed that a substantial part of motivation was biological, rather than psychological or social.

The drive model of sexuality leaves important questions unanswered. For example, how do persons determine where and how they will seek sexual release? Although drive theory provides an explanation for the motivation for interacting, it does not explain how and in what manner persons will interact sexually, nor why relatively stable patterns of sexual interaction emerge over time (Stein, 1989).

Empirical findings. Turner's conceptualization of motivation can be used to organize the empirical findings on

motivating factors in marital sexuality. His motivational processes category deals with processes internal to the individual which cause the individual to act and interact. Recall that he is especially interested in how people are energized to interact by their need to maintain self esteem and consistency in their attitudes about themselves. Attitudes have several components. These include the cognitive, evaluative, and behavioral. It is the behavioral component that is of special interest here. Not only do we hold attitudes, but we act upon these attitudes as well In a manner somewhat similar to biological motivation, the behavioral component of attitudes involves action and interaction as well. Our needs for security, trust, inclusion and affirmation of self are mirrored in our attitudes of self worth. When one's attitudes about oneself are threatened, one is motivated to act and interact with others in order to try and correct the situation, thus attitudes involves not only thoughts about oneself, one's evaluation of self and situation, but a behavioral component as well.

Sociology currently lacks theory and methodology for dealing with biological motivations. Thus, while their presence is recognized, they are not dealt with in the present study. Instead the focus is on attitudes as motivators. Attitudinal variables include those beliefs and opinions about oneself and about one's life in general that

persons bring into a marital relationship. As the literature review in the previous chapter has shown, attitudinal variables such as gender role orientation, individualism, self worth, well being, religiosity, life satisfaction, and personal happiness all provide motivation for marital interaction in the form of coitus. These variables all include the self evaluation component that Turner identifies, thus providing motivation to interact. The data set used in this study contains measures of all these variables, thus making it easy to replicate past empirical work.

In summary, Turner's theory suggests that interaction does not take place unless participants are motivated to interact. Motivation comes in a variety of forms--biological, psychological, and social. Turner is especially interested in how attitudes about oneself influence one to act and interact. Sexuality theorists have dealt mainly with biological motivations, while empirical studies in the social sciences have dealt with social or psychological motivators. Since one aim of the current study is to replicate the empirical work of the social scientists, and because social science data lack measures of biological motivation or drives, attitudes and values, which capture to some extent social and psychological motivations to act and interact, are utilities.

Interaction. The second step in Turner's theory of social interaction is the process of interaction itself. Once a person has been sufficiently motivated, interaction will take place. "Interaction is what people actually do when they influence each other's behavior" (Turner, 1988, p. 15). Turner refers to the signaling and interpreting processes that go on during interaction as the "mechanics of interaction". He notes that the degree of interaction between two or more actors is an additive function of their signaling and interpreting. When actors interpret signals correctly, interaction proceeds smoothly and is likely to be repeated. Structure emerges from repeated interaction, and shapes future interaction. On the other hand, when signals are incorrectly interpreted conflict may occur, or the actors may cease to interact.

Sexuality theory. Sexuality theorists (Gagnon and Simon, 1973; Long and Hadden, 1985; Schwartz and Laws, 1977) deal with interaction in a manner similar to Turner. Unlike the drive theorists, they emphasize nurture rather than nature. Rather than seeing sexuality as the result of overpowering drives or impulses, interactionists emphasize the importance of human agency and individual variation (Stein, 1989). They recognize that while motivations and cultural constraints are indeed an important influence on sexuality, the importance of interaction among individuals should not be ignored. Sex is seen as a negotiation between

individuals, operating within the constraints of socially constructed reality. In other words, this perspective seeks to explain how individuals satisfy their sexual needs by negotiating sexual conduct through social interaction, while operating under cultural constraints.

One of the most frequently used interactionist frameworks is sexual scripting. It illustrates how the emphasis has shifted from culture and motivational processes to interactional. Early scripting theory (Gagnon and Simon, 1973; Laws and Schwartz, 1977) looked at how culture influences and shapes social norms, and in turn how these social norms dictate "sexual scripts". They saw culture as determining sexual behavior by providing the appropriate "scripts" for persons to follow when interacting with others. According to scripting theory, the meanings that sexual events have for individuals are determined by social position and cultural indoctrination, and "sexual scripts constitute the available repertoire of socially recognized acts and statuses, and the roles and rules governing them" (Laws and Schwartz, 1977, p. 217). Individuals are motivated to seek out sexual gratification, and through socialization they learn the cultural scenarios available to achieve this gratification (Gagnon and Simon, 1973). This is not a static process, however, as persons learn appropriate sexual scripts through socialization, and then modify these scripts when interacting with others.

Scripting theory views marital sexuality as a process determined by interactions between individuals who are acting within socially imposed rules and constraints, implying that marital coital frequency is affected by both interactional and structural factors.

Interactionist theory in general, and scripting theory in particular, leave some questions unanswered. For example, they do not answer the question of why some people choose some sexual scripts over others. Nor do they explain determinants of sexuality on the macro level. That is, they leave unanswered the question of where cultural scenarios come from in the first place, and who determines them. Finally, while scripting points out the importance of attitudes and beliefs and conscious motivation, it fails to acknowledge the presence of unconscious needs and drives (Stein, 1989).

Empirical findings. Just as Turner's motivational processes category can be used to organize the empirical findings on what causes persons to interact, so can his interactional processes category be used to organize the empirical findings on marital interaction. Turner's interactional processes category deals with the signaling and interpreting that goes on when persons interact on an interpersonal level. While the empirical findings of the social scientists on marital coital frequency do not deal with signaling and interpreting directly, indirect measures

of marital interaction do exist. For example, in the previously reviewed literature, marital happiness, marital friction, feelings of marital equity, arguments, separation intentions, employment, fertility concerns and future birth decisions all influence the interpersonal relations between wife and husband, and impact on marital sexuality. Thus, while these are not ideal measures, in the sense that they do not examine interaction directly, they do give us an indication as to how marital interaction is proceeding in terms of quality and quantity. While the data set utilized here cannot capture the actual mechanics of interaction, it does provide some indication as to the outcomes of this interaction.

To summarize, Turner was interested in the mechanics of interaction, or what actually goes on when persons interact. The sexuality theorists, while interested in mechanics, were also interested in how these interactions take place given cultural constraints. On another level, the empirical work on marital sexuality has dealt with interaction only indirectly. Rather than looking at "mechanics", social scientists have focused on indirect measures of marital interaction, such as how persons perceive their marriages. The focus of the current project is similar. Rather than measuring exchanges, negotiations and bargaining--the outcomes of these processes--marital quality, stability, and equity, are examined.

Structure. The third element in Turner's sensitizing scheme is the process of structuring. He uses the term structuring "to denote the fact that social interactions are often repeated across time as well as ordered in physical space" (Turner, 1988, p. 16). He warns that theories of motivation and interaction tend to fall short when it comes to answering the question of how and by what processes interactions become structured. Again, Turner is only interested in structure as it affects the process of interaction. Turner notes that the more persons interact, and the more they categorize, regionalize, normatize, ritualize, routinize and stabilize their interactions, the more structure emerges from their interaction. In other words, the more consensus over interaction, the more likely it is to be repeated, and the more likely stable interaction patterns are to emerge.

Sexuality theory. Just as Turner feels that structures are important in understanding interaction, so do the sexuality theorists. While Turner is interested mainly in the structures that emerge from interaction on the micro level, the functionalists are more concerned with how structures on the macro level affect sexuality. The functionalists take the basic ideas of the drive theorists and add the influence of social structure to them (Stein, 1989). Sexuality is still viewed as an innate biological drive, but functionalists emphasize the ways in which it is

shaped and constrained by cultural and social forces (Beach, 1977; DeLameter, 1981). They are interested in how social norms structure sexual behavior. It is the functionalists who developed the notion of normal, functional sexuality (Davis, 1961; Parsons and Bales, 1955). Social institutions are seen as devices by which sexuality is monitored and controlled, and by which normality is defined and ensured. While this viewpoint adds the influence of social structure to motivational explanations of sexuality, change and diversity are discounted, and the effects of social interaction are ignored (Stein, 1989).

Empirical findings. The processes which Turner labels as structuring are those which lead to repeated interactions. While Turner was interested in how structures arise from interaction, the literature on marital coital frequency frequently ignores this aspect of structure. Instead, its focus in more in line with the functionalist sexuality theorists, who examined the influence of social structure without explaining how this structure had arisen in the first place. The literature on structuring focuses on social structures which constrain persons sexually by providing them with socially recognized "rules" or "scripts". For instance, this literature might examine the social norms prescribing how someone of a certain age, gender or racial status should behave. These researchers are not interested in where these norms came from in the

first place, only in how they provide rules for sexual interaction. The empirical literature has identified several structuring factors influencing coital frequency. While not structuring factors in the truest sense of Turner's theory, the structures these variables reflect are similar since both are the product of past interaction, and since both act to structure future interaction. Ideally, one would measure the norms attached to these statuses rather than the statuses themselves. Since this is not possible with the current data set, differences in status, and by inference, difference in the norms attached to these statuses are examined. These include age, age at marriage, marital duration, cohort, education, occupation, income, race, gender, religious preference, area of residence, number of children, having cohabited previous to marriage, having been married more than once, pregnancy and health status.

In sum, while Turner was interested in the micro level structures that arise from repeated interaction, the focus of the sexuality theorists, most sexuality researchers, and the current study as well, is on how macro level norms act to constraint us and add structure to our interactions. Given the limitations of the data set utilized here, the current focus is on how societal rules for sexual interaction affect those persons who hold certain statuses, rather than on how rules arise from a couple's interaction.

Summary. In this section, the conceptual model that Turner presented in his theory of social interaction has been used to organize existing sexuality theory, as well as to organize empirical findings. While the fit between Turner and the theoretical and empirical literature on marital coital frequency is not perfect, this was never the intention. Rather, Turner's theory was used as a sensitizing scheme--a way of suggesting where to start or where to look when organizing existing theory and research and developing an analytic model. Other theorists could have been used for the same purpose, but the Turner theory was chosen because of its clarity, concreteness, and because it deals specifically with interaction without taking a narrow, traditionalist approach. Indeed, this project seeks to combine the influences of several diverse schools of thought. As Stein (1989) suggests, the micro processes of interaction and agency are best understood couched within the context of the macro (societal and cultural) influences that constrain them. Now that past work has been organized under a general rubric, the next task is to move beyond organization and to develop a tentative explanatory framework dealing with marital coital frequency.

Towards a Theory of Marital Coital Frequency

An Analytic Model

The model presented in Figure 3-2 provides a pictorial representation of the relationships among the processes suggested above. In general, the closer the classes of variables are to one another (and the shorter the lines between them) the greater effect they have upon each other. While this model is similar to the one suggested by Turner, several differences exist. For example, since marital coital frequency is the focus of this study and because of the interest in how other forms of interaction affect it, it is now in a category separate from other types of marital interaction. Many more feedback relationships are presented than were suggested by Turner's model. The reason for this is that Turner's theory deals with social interaction in general, and this framework is dealing with marital coitus, which is one form of marital interaction, in specific. Finally, Turner's original categories--motivation, interaction, and structuring--have been modified liberally for use in this project. Thus, in adapting a broad theoretical perspective for use as a sensitizing scheme, changes suggested by previous literature and theory were included, and the final model, while similar to Turner's is different in many ways.

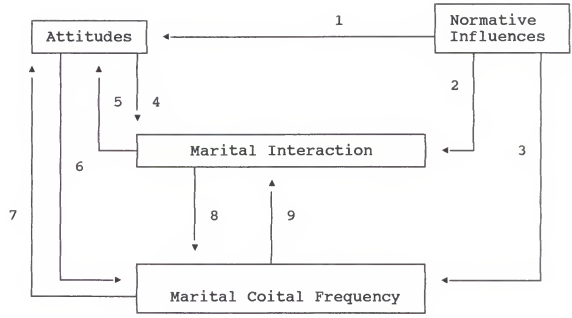


Figure 3-2: A Conceptual Model of Marital Coital Frequency

As the model shows, normative influences affect attitudes (line 1), interaction (line 2), and marital coital frequency (line 3). Since these normative influences exist at the macro level, no feedback relationships are pictured. Attitudes affect both marital interaction (line 4), and marital coital frequency (line 6), with feedback relationships from marital interaction (line 5) and marital coital frequency (line 7) back to attitudes. Finally, marital interaction affects marital coital frequency (line 8), and a feedback relationship exists such that marital coital frequency influences marital interaction (line 9).

To summarize the theoretical strategy up to this point, Turner's model has been used as a sensitizing scheme to

organize the previous literature, and to suggest an empirical model for the study of marital coital frequency. The next step is to use the model to suggest relationships between the processes, as well as to suggest relationships among the individual variables in the form of hypotheses. Because so many hypotheses are suggested, only those dealing with direct effects of attitudes, marital interaction, and normative influences on marital coital frequency are presented. In later chapters many of the hypothesized relationships suggested by the conceptual model are tested, even though not formally stated. By expanding upon the framework presented below, the logic of testing these unstated relationships should become apparent.

Translating The Model Into Testable Hypotheses

Normative Influences

Turner was interested in how structuring processes affect interaction. He noted that the more persons interact, the more they categorize, regionalize, normatize, ritualize, routinize, and stabilize their interactions. In the current research, the interest is in how macro level variables influence micro level processes. That is, normative influences replace Turner's structuring processes, and the focus is on how normative influences act to shape attitudes, structure marital interaction, and influence marital coital frequency.

Normative influences affect attitudes. The more restrictive the norms surrounding the status a person holds, the more that person develops attitudes which value conformity to these norms (Laws and Schwartz, 1977). Persons who differ in terms of demographic and physical characteristics will hold different attitudes and values. For example, if the norms surrounding one's age or gender dictate that one be independent and assertive, one is more likely to hold beliefs that value self direction (Simon and Gagnon, 1986; Laws and Schwartz, 1977).

Marital interaction is also affected by normative influences. The more restrictive the norms surrounding a person's status the more marital interaction emphasizes conformity to these norms (Laws and Schwartz, 1977). For example, males in this society are constrained by norms which say that they should show no emotion and disclose little. By conforming to these norms, the quality of their marital interaction is lowered. Persons who have small children are influenced by norms which say that they should not maintain separate residences (Gerstel and Gross, 1982), thus most persons with small children will not live apart, even if it would be beneficial to their careers to do so.

The norms surrounding a person's status also affect marital coital frequency. That is, in our society norms regarding the "proper" amount of marital intercourse differ according to such factors as one's race, age, gender, and

health (Simon and Gagnon, 1986; Laws and Schwartz, 1977). For example, in our culture such groups as women, the aged, the pregnant, and the chronically ill are expected to have less intercourse than males, the young, those not pregnant, and those in good health.

Attitudes

Turner noted that the initial step in interaction is motivation. He saw people as motivated by anxiety resulting from unmet needs, especially the need to maintain positive attitudes about themselves. In this research, attitudes are the type of motivation used to explain interaction. Attitudes not only motivate us to interact, but act to shape interaction to some degree as well. Previous literature has suggested that one's attitudes about oneself and one's life, affect one's marital interaction, the normative influences on one's life, and even the frequency of marital sexual intercourse.

Generally, the more positive one's self concept and one's view on life, the greater the quality and quantity of marital interaction (Bell and Bell, 1972; Edwards and Booth, 1976; Masters and Johnson, 1970). It follows then, that persons satisfied with their lives in general, who experience high levels of psychological well being, are more likely to be happy in their marriages, contemplate separation less frequently, and argue less often (Edwards and Booth, 1976), and the reverse is true as well. The more

one values self direction, the lower the quantity and quality of marital interaction. Thus, persons who value individualism are likely to share fewer activities with their partners, and to experience less marital happiness (Edwards and Booth, 1976; Scanzoni et al., 1989). Persons with attitudes prescribing how they should act and interact tend to interact in more traditional ways. In order to maintain their self esteem, they must meet certain standards, thus they act and interact in very structured and traditional ways. For example, in marriages where the partners have traditional gender role beliefs, partners tend to share fewer activities (Geerken and Gove, 1983), and the wife tends to do more homemaking and childcare chores, while the husband tends to be more concerned with traditional male pursuits such as employment and money. Marriages in which partners, especially the male, hold traditional gender role norms are more likely to have physical violence (Straus et al., 1980). Although violence is becoming unacceptable in marriages today, it has been traditionally acceptable for the male to use violence in dealing with his wife.

Attitudes affect marital coital frequency in much the same way as they affect marital interaction. That is, the more positive one's attitudes about oneself and one's life, the greater the frequency of marital intercourse (Masters and Johnson, 1970; Bell and Bell, 1972). For example, individuals who are happy and satisfied with their lives are

more likely to have high rates of marital coital frequency than those who are unhappy and unsatisfied (Masters and Johnson, 1970; Bell and Bell, 1972; Edwards and Booth, 1976). Although this relationship probably operates in the reverse direction as well. The more one values self direction, the less one is dependent on traditional behaviors as a source of self esteem, and the lower the frequency of marital intercourse (Edwards and Booth, 1976; Scanzoni et al., 1989). So one might expect that women who are not gender role traditional and who value individualism to have lower coital frequencies (Scanzoni et al., 1988). Finally, the less restrictive one's attitudes, especially those about sex, the higher the rate of marital coitus.

Marital Interaction

Although Turner focused on the influences of motivation and structuring variables on interaction, he was also interested in the reciprocal influence of interaction upon these variables. Turner was interested in the signaling and interpreting processes during interaction, and what people actually did to influence each other's behavior. Again, the focus here is narrower. The interest here is in how the process of interaction affect one's attitudes and values and the amount of marital coitus that takes place.

Interacting with one's spouse influences one's attitudes and beliefs (Scanzoni et al., 1988; Tavris and Sadd, 1977). Research suggests that the higher the quality

of marital interaction, the more positive one's attitudes about oneself, one's partner, and one's life become. That is, if things are going well in one's marriage, this will influence such attitudes as life satisfaction and well being. For example, research has shown that the more partners share activities, and the more they feel that the division of marital responsibilities is fair, the happier they will be as individuals (Pleck and Staines, 1985). The greater the amount of negative marital interaction, the greater the likelihood of negative attitudes. For example, in those marriages where violence occurs, and where couples argue frequently, partners tend to have lowered life satisfaction, and lowered well being (Straus et al., 1980). Finally, the more partners interact, the more their attitudes come to value interaction.

Marital interaction also affects frequency of marital coitus. The more a couple interacts, and the greater the quality of that interaction, the more intercourse they have (Blumstein and Schwartz, 1983; Doddridge, 1987). To illustrate how quality of interaction affects marital coitus, couples who are unhappy in their marriages, who argue about sex, or who feel that their marriages are unfair are less likely to have sex than their counterparts in marriages with less friction.

Control, or power is also an important issue (Stein, 1989). The marital partner who controls other interactions

(and who has the most power in the relationship), is more likely to control intercourse as well. Generally, the more control is shared, the greater the quality of the marriage, and the higher the rate of marital coitus.

Quantity of interaction is also important. Couples who live apart, or who share few activities would be less likely to have high rates of intercourse than those who interact more frequently.

Marital Coital Frequency

A feedback relationship exists such that marital coital frequency influences attitudes and marital interaction. For example, it is entirely plausible that rates of marital intercourse would affect such attitudes as life satisfaction, well being, self worth, and alienation (Bell and Bell, 1972). Persons who have intercourse with their spouses rarely or never would be more likely to have lowered satisfaction, self worth and well being, and heightened feelings of alienation. One might argue that this explanation is based on the assumption that having sex with one's spouse is normal, while not having sex or having low levels is deviant (Blumstein and Schwartz, 1983). Indeed, that is the stance taken here, since in our society one is expected to have sex in one's marriage. One could even argue that marital coitus can be used as a barometer to gauge the well being of marital partners, and even the marriage itself--that is that sexual satisfaction can be

equated with personal and marital satisfaction. While this position is rather extreme, it does hold some element of truth. It is possible that having low levels of marital coitus might cause one to experience self doubt, or have negative feelings about oneself. Since our societies norms say that persons in "happy" or "good" marriages have sex frequently (Blumstein and Schwartz, 1983), deviating from these norms could certainly cause one to experience doubts about oneself, and thus contribute to "negative" attitudes.

Finally, marital coital frequency feeds back upon marital interaction (Bell and Bell, 1972; Levinger, 1979; Edwards and Booth, 1976). The more a couple interacts in one way (coitus), the more likely they are to interact in other ways. The opposite is also true--the less a couple interacts sexually, the less they may interact in general. For example, couples who have coitus less frequently might be more likely to separate and less likely to share activities (although it is difficult to determine the direction of these relationships since in all likelihood they are reciprocal). Other reciprocal relationships probably exist--for example, does marital coitus affect marital happiness, or vise-versa?

It becomes quickly evident that the relationships described here are very complex. Marital coital frequency is not shaped by a single influence, but by the combined influences of attitudes, marital interaction, and normative

influences. Neither are the relationships unidirectional, many feedback relationships exist. Finally, although not elaborated upon here, the possibility of indirect relationships is also very strong. Thus, it becomes apparent that any theoretical explanation of marital coital frequency will be complex, and that the theoretical work done here is at best preliminary.

Some Hypotheses on The Effects of Attitudes, Marital Interaction and Normative Influences Upon Marital Coital Frequency

The best theories in the world are useless if they cannot be tested. Thus, the tentative theorizing presented here was done with an eye towards organizing previous findings and testing hypotheses suggested by them, as well as towards the availability of data to test these hypotheses. Thus, instead of hypothesizing about the three processes suggested by Turner, his scheme was used simply to organize empirical findings and to suggest hypotheses for testing. Since biological motivation is difficult to conceptualize and measure in social science, only the attitudinal emphasis of Turner was used. Marital interaction was not conceptualized in terms of the actual mechanics or processes of interaction, but rather in terms of the outcomes of this interaction. Finally, normative influences were not conceptualized in terms of the norms themselves, but rather in terms of the categories which have

certain normative expectations attached to them. While this differs in some respects from Turner's theory, one should keep in mind that Turner's theory is not being tested, but was used rather as an organizational tool. Moreover, the variables theorized about here were drawn from previous research and represent the most often studied influences on marital coital frequency.

Previous research has identified variables within three broad groups which are specific to the study of marital coital frequency. The ones listed here are also readily obtainable using the National Survey of Families and Households data set (to be described later). Attitudinal variables include gender role orientations, individualism, life satisfaction, well being, self esteem and religiosity. Marital interaction variables include marital happiness, perceptions of fairness in marital interactions, marital violence, number and sources of arguments, probability of separation, employment demands, future birth intentions, fertility decisions and opportunities to interact or spend time together. Structuring or normative variables include the time related variables of age, age at marriage and marital duration; the demographic variables of education, occupation, income, race, gender, religious preference, place of residence and number of children; the physical variables of current or recent pregnancy, sterilization, medical problems, and chronic or debilitating diseases;

and the prior relationship variables of having been divorced before and having lived together before marriage.

Having delineated the groups of variables that are theoretically relevant to the study of marital coital frequency, and the interconnections between them, the next task is to formally state hypotheses suggested by the above discussion. Due to the large number of hypotheses this involves, only the hypothesized relationship between each of the independent variables and marital coital frequency will be presented:

I. Hypotheses for Attitudinal Variables:
   A. Marital coital frequency is a positive and additive function of:
      1. gender role traditionality
      2. life satisfaction
      3. emotional well being
      4. religiosity
      5. self esteem
      6. locus of control
   B. Marital coital frequency is a negative and additive function of:
      1. individualism

II. Hypotheses for Interactional Variables:
   A. Marital coital frequency is a positive and additive function of:
      1. marital happiness

2. plans to have children
3. shared activity
4. perceived fairness in marriage
5. sterilization

B. Marital coital frequency is a negative and additive function of:

1. marital violence
2. number of arguments
3. arguments over sex
4. perceived likelihood of separation
5. employment demands
6. importance of limiting the number of children
7. living in separate residences
8. previous separation
9. feelings of marital trouble
10. alcohol or drug problems

III. Hypotheses for Normative/Structuring Variables:

A. Marital coital frequency is a positive and additive function of:

1. education
2. occupational status
3. income
4. age at marriage
5. being employed

B. Marital coital frequency is a negative and additive function of:

1. age
2. marital duration
3. belonging to a racial or ethnic minority
4. being female
5. being Protestant
6. living in a rural area
7. number of children
8. having a chronic medical condition
9. being married for the second time
10. cohabiting before marriage

Conclusions

While by no means a complete delineation of the factors affecting marital coital rates, the framework presented here provides a start towards describing this phenomena. In this chapter a tentative framework explaining marital interaction in the form of coital frequency has been developed. The micro processes of motivation and interaction have been examined within macro level structural constraints. Marital coital frequency is presented not as the product of any one of these processes, but as the result of their interaction and reciprocal relationships.

Further Considerations

The next question is, are the relationships presented above linear? In other words, do threshold effects exist for some of these variables? And, are the predictors of marital coital frequency the same at very high and very low frequencies? It is unlikely that the predictors operate in similar fashions at high and low levels, since the literature suggests that marriages with low levels of coitus are very different from marriages with high levels. Moreover, the likelihood that threshold effects exist is very great. For example, if one accepts the hypothesis that the greater the marital happiness, the higher the level of marital coital frequency, then at what point does satiation take place? Are couples who have sex three times a day happier than those who have sex three times a week? It thus becomes apparent that at some point the rate of coital frequency starts to rise less steeply for each unit increase in marital happiness. This is probably true of many of the other predictors of marital coital frequency as well. Since empirical findings and theoretical explanations in this area are very sparse, hypotheses cannot be delineated. Thus, the second part of this research is exploratory, and seeks to answer the questions posed above.

CHAPTER FOUR
METHODOLOGY

Data

The data for this study are taken from the National Survey of Families and Households which was collected during the period of March 1987-May 1988 at the University of Wisconsin by Larry Bumpass and James Sweet. This data set constitutes a nationwide sample of noninstitutionalized persons over the age of 16. A total of 13,017 respondents were surveyed. The main sample totals 9,643 persons, with several groups such as minorities, single parents, persons with step-children, cohabitating persons, and persons who recently married oversampled to ensure that large enough samples existed for them. One adult per household was selected to be the primary respondent. In this study, only one partner from intact married couples was selected. While this means that we have only one spouse's report of the marriage, and marriages typically tend to be seen differently by each spouse (Bernard, 1972), comparing spouses accounts of their marriages is not a focus of this study. Data were weighted to assure that they were in fact representative of the population of the United States as a whole.

Using the National Sample of Families and Households data represents an advance over previous studies in several ways. Recall that many of the samples used in previous studies were geographically limited, outdated, or failed to ask pertinent questions. The NSFH data on the other hand is nationwide, current, and asks a wide array of questions about marriages, families, and individuals.

Sample Characteristics

Table 4-1 contains descriptive information about the sample utilized in this research. Information is based upon a weighted sample. Missing values, except for the dependent variable, have been assigned mean values. As can be seen from the table, gender is evenly divided between males and females, with fifty percent of each. Eighty-six percent of the sample is white, fourteen percent nonwhite. The average age is 44. The average family income of the respondent is $43,305 annually, a little higher than the national average. Most respondents had at least a high school education, with the average number of years of education being 12.75. Sixty-eight percent were employed, thirty-two percent were not. The majority of the sample are Protestant (sixty-two percent), with Catholics (twenty-five percent) and Jews (three percent) following. Seven percent of the sample claimed no religious preference, and three percent were a religion other than the ones mentioned above.

Table 4-1: Sample Characteristics

CHARACTERISTIC	MEAN	PERCENTAGE
GENDER:		
Male		.50
Female		.50
RACE:		
White		.86
Nonwhite		.14
AGE:	44	
INCOME:	43,305	
EDUCATION:	12.75	
EMPLOYED:		
Yes		.68
No		.32
RELIGION:		
None		.07
Protestant		.62
Catholic		.25
Jewish		.03
Other		.03
NUMBER OF CHILDREN:		
Age 0-4	.31	
Age 5-18	.75	
AGE MARRIED:	25	
YEARS MARRIED:	19	
TIMES MARRIED:		
One Time		.77
Two Times		.19
Three or More Times		.04
PREVIOUS COHABITATION WITH THIS SPOUSE:		
Yes		.25
No		.75
LOCATION:		
SMSA		.76
Rural		.24
CURRENTLY PREGNANT (Persons of Child-bearing Age):		
Yes		.11
No		.89
CHRONIC HEALTH PROBLEM:		
Yes		.07
No		.93

The average number of pre-school children was .31, and the average number of school-age children was .75. Most of the respondents had been married for quite some time, the average length of marriage was nineteen years. The average age at current marriage was twenty-five. Only one-quarter of the sample had cohabited with their spouse before marriage. Most of the sample (seventy-six percent) were urban dwellers. Only twenty-four percent lived in rural areas. Of the couples of child-bearing age, eleven percent were currently pregnant, and were excluded from the final sample. Finally, only seven percent of the sample had chronic health problems, with ninety-three percent having no long term physical or physiological impairments.

Variables of Interest

The dependent variable of interest in this study is marital coital frequency, as measured by the question: "About how often did you and your husband/wife have sex during the past month?" While not an ideal indicator, since it is impossible to determine if this is average for the couple, respondents are better able to recall sexual activity over the past month than for longer periods, and monthly frequency provides more information than shorter time periods. Moreover, this measure has been used successfully by other researchers (Edwards and Booth, 1976; Greenblat, 1983; Jasso, 1985; Scanzoni et al., 1989). An

additional concern might be that some of the couples reporting no sex for the past month actually might never have consummated their marriages. The principal investigators on the NSFH feel, however, that this is highly unlikely. Greenblat (1983) notes that response category bias may be a minor problem in studies of this nature, taking the form of rounding error, since persons tend to think of their average weekly frequency and multiply it by four. In many studies, the numbers 4, 8, 12, 16 and 20 appear more frequently than their neighbors. This is also the case with the NSFH data. By performing the transformation described later, this problem is lessened. Another potential problem with the dependent variable lies in the accuracy of self reporting. Studies regarding self reporting of deviant behavior such as smoking (Akers et al., 1983), drug use (Single et al., 1975; Whitehead and Smart, 1972), and premarital sex (DeLameter and MacCorquodale, 1975; DeLameter, 1974) show, however, that persons are generally truthful about their practices, although they may tend to under report some activities.

Preliminary data screening uncovered several other potential problems as well. For instance, over 1500 of the 6881 persons in the main sample who were asked the coital frequency question chose not to answer it. This is typical of studies dealing with sexuality. Although persons today are much more willing to answer questions about the

"private" parts of their marriages than their grandparents, many people choose not to answer this type of question. Several solutions exist for this problem (Tabachnick and Fidell, 1989). These include assigning the mean to all missing values, assigning the missing observation a value based on some prior knowledge, or deleting the cases with missing values entirely. Since assigning the mean to so many missing values would cause severe kurtosis problems, this alternative was not chosen. Neither did I know enough about the sample to assign a value to the missing observations, so the only alternative left was to delete them. In order to test whether the persons not answering were different from persons answering, the coital frequency question was dichotomized into a new variable, with values of missing and not missing. Bivariate correlations were then performed to see if there were any significant relationships between response category and the other variables of interest (see Table 4-2). The largest bivariate correlation was .19 between response and total family income. Only five of the remaining variables were correlated higher than .10 with the response variable. Thus it was concluded that the missing values posed no great threat to the reliability of the study, and the observations with missing values for coital frequency were omitted. Respondents who were currently expecting a child were also omitted, since rates of coitus during pregnancy may not

reflect what is usual for the couple. After choosing only the main respondent from each couple the final sample size was 5292.

Table 4-2: Pearson Correlations Between Responding To The Coitus Question And All Other Variables

VARIABLE	RESPONSE	N
Gender Role Traditionality:		
Share Chores	.03	6484
Encourage Daughters	.03	6472
Traditional Division of Labor	.10***	6504
Individualism:		
Individual Freedom	.04**	6503
Better to Marry	.03	6493
Life Satisfaction	.03	6036
Well Being	-.02	6502
Religiosity	-.10***	6153
Locus of Control	-.03	6455
Self Esteem	-.01	6036
Marital Happiness	.08***	6535
Violence	-.03	6062
Arguments:		
Household Tasks	-.10***	6275
Money	-.10***	6279
Spending Time Together	-.08***	6246
Sex	-.12***	6134
Having A(nother) Child	-.03	6090
In-Laws	-.07***	6164
Children	-.10***	5854
Previous Separation	-.02	6775
Probability of Separation	-.06**	6180
Hours Worked Per Week	-.02	4714
Work Same Schedule Each Week	-.04	4477
Sterilized	-.02	3678
Plans to Have A(nother) Child	-.04	2581
Live in Separate Households	.01	6879
Marriage in Trouble	-.10***	6164
Alcohol or Drug Problem	-.05**	6177
Fairness In Marriage:		
Chores	-.02	6623
Employment	-.01	6262
Money	.01	6558
Children	-.05**	6278
Share Activities	.06**	6648

Table 4-2--Continued

VARIABLE	RESPONSE	N
Respondent's Age	.14***	6878
Age at Marriage	-.01	6281
Length of Marriage	.15***	6822
Education Level	-.14***	6851
Socioeconomic Status	-.09***	4500
Total Family Income	.19***	6879
Ethnicity	.01	6850
Gender	.01	6879
Religion	.01	6813
Area of Residence	-.03	6879
Region of Country	-.01	6879
Number of Preschool Children	-.06**	6879
Number of School Age Children	-.04*	6879
Cohabited Before This Marriage	-.09***	6879
Times Married	-.03	6878
Chronic Illness	.03	6879
Health Status	-.05*	6528
Currently Employed	.11***	6827

* = SIGNIFICANT AT .01 LEVEL
** = SIGNIFICANT AT .001 LEVEL
*** = SIGNIFICANT AT .0001 LEVEL

Another potential problem is the distribution of the data. Table 4-3A shows a frequency distribution for marital coital frequency. The range of this variable is 0-90. The data are slightly bimodal and skewed to the right. Often, in cases such as this, outliers are deleted, and if the data are still not normally distributed, transformations are attempted. One drawback of transformation is that you lose the original scale of the variable. With this in mind, the decision was made to delete the two largest outliers (persons claiming to have

had intercourse 77 and 90 times per month respectively). As this did not solve the skewness problem, a square root transformation was done to bring large values closer to the mean (Table 4-3B). While correcting the problems of skewness and kurtosis, the distribution was still mildly bimodal (due to the large number of persons having no sex in the past month). Thus, the decision was made to trichotomize the variable into low, average, and high for the portion of the analysis comparing persons at average levels to those at below or above average levels. Low frequency is defined as falling one or more standard deviations below the mean, and high frequency as falling more than one standard deviation above the mean. According to the Central Limit Theorem, 68 percent of the observations in a normally distributed sample fall between one standard deviation below the mean, and one standard deviation above the mean (Agresti and Finlay, 1983). In this case, 71 percent of the data fell within these bounds. The decision to categorize the variable was also supported by the fact that for grouped data, it is the sampling distributions of the means of variables that have to be normally distributed. The Central Limit Theorem states that, with large sample sizes, sampling distributions of means are normally distributed regardless of the shapes of the distributions of the variables (Tabachnick and Fidell, 1989).

Table 4-3A: Frequency Distribution for Coital Frequency (Before Transformation)

Coital Frequency	Frequency	Percent	Cumulative Percent
0	752	14.0	14.0
1-4	1652	31.0	45.0
5-10	1835	35.0	80.0
11-20	829	16.0	96.0
21-60	224	4.0	100.0

N=5294		Skewness	1.96
Mean=7.06		Kurtosis	6.24
S.D.=6.95		D:Normal	.16
Range=0-90		p (normality)	.01

Table 4-3B: Frequency Distribution for Coital Frequency (After Square Root Transformation)

Coital Frequency	Frequency	Percent	Cumulative Percent
0	752	14.0	14.0
1-2	2974	56.0	70.0
3-4	1376	26.0	96.0
5-6	181	03.0	99.0
7-8	9	01.0	100.0

N=5292		Skewness	.13
Mean=2.28		Kurtosis	.03
S.D.=1.36		D:Normal	.10
Range=0-7.74		p (normality)	.01

The replication portion of the analysis requires continuous, normally distributed data. Rather than omit this analysis, the decision was made to retain coital frequency as a continuous variable, keeping in mind that the shape of its distribution might have some effect on the results.

In order to determine if persons falling in the low categories were for the most part elderly, in bad health, or living apart from their spouses, frequencies were run for each of these groups. As the data in Table 4-4 show, persons having very low (or very high) levels of intercourse are not clumped into any one age, health or living arrangement category. Table 4-5 shows Pearson correlations between the dependent variable and all independent variables. While respondent's age and time married are highly correlated with marital coital frequency, this is to be expected given what we know empirically.

Table 4-4: Coital Frequency by Age, Living Arrangement, and Health Status

Coital Frequency	Age <20	20-29	30-39	40-49	50-59	60-69	70+	Total
Low	0	59	91	84	123	201	194	752
Average	20	821	1311	769	450	302	106	3779
High	21	328	261	109	27	10	5	761
Total	41	1208	1663	962	600	513	305	5292

Table 4-4--Continued

Coital Frequency	Living Arrangement: Live with Spouse	Live Apart	Total
Low	709	43	752
Average	3754	25	3779
High	757	4	761
Total	5220	72	5292

Coital Frequency	Health Status: Very Poor	Poor	Fair	Good	Excellent	Total
Low	25	40	180	331	155	731
Average	49	71	540	1889	1154	3703
High	6	7	93	394	249	749
Total	80	118	813	2614	1558	5183

Table 4-5: Pearson Correlations For Frequency Of Coitus By All Other Variables

	FREQCOIT	N
GENDER01	-.02	5153
GENDER02	-.01	5131
GENDER3A	-.12***	5156
INDIVID1	.01	5155
INDVD2A	-.10***	5148
WELLBENG	.13***	4689
WELBNGSC	-.06***	5086
RELIGSC	.03	4940
LOCUS	-.05**	5126
MARITALH	.15***	5181
VIOLENCE	.05*	5042
WHYARGU1	.07***	5252
WHYARGU2	.08***	5254

Table 4-5--Continued

	FREQCOIT	N
WHYARGU3	.04*	5225
WHYARGU4	.08***	5225
WHYARGU5	.09***	5132
WHYARGU6	.12***	5188
WHYARGU7	.01	4899
PREVSEPR	.03	5220
PROBSEPR	-.03	5129
HOURSWRK	.04	3768
SAMESCHD	-.01	3581
STERILIZ	.06*	3024
ADDCHILD	.12***	2109
LIVEAPRT	.09***	5292
MARRTROU	-.03	5104
ALCHDRUG	-.01	4904
FAIRCHOR	.01	5266
FAIRWORK	.03	5047
FAIRMONY	.02	5235
FAIRCHLD	.22***	5004
SHAREACT	.08***	5285
RSPNDAGE	-.50***	5292
AGEMARR	-.11***	5258
TIMEMARR	-.45***	5258
EDUCATCP	.12***	5280
SOCIOSTA	-.03	3599
TOTFAMIN	-.08***	5292
ETHNIC	.01	5268
GENDERXX	-.03	5292
RELIGON1	-.01	5249
SMSA_NOT	-.01	5292
REGIONAL	.03	5292
CHILD0_4	.16***	5292
CHLD5_18	.19***	5292
COHAB	.16***	5292
TIMESMAR	.01	5291
CHRONIC	-.14***	5292
HEALTHST	.19***	5183
CURREMPL	-.23***	5253
SELFWTSC	-.10***	5072

*=SIGNIFICANT AT .01 LEVEL
**=SIGNIFICANT AT .001 LEVEL
***=SIGNIFICANT AT .0001 LEVEL

Operationalizing the Variables

The National Survey of Families and Households contains the following independent variables of interest: 1) attitudinal variables such as gender role orientations, individualism, life satisfaction, well being, religiosity and self esteem; 2) marital interaction variables such as marital happiness, marital violence, number and sources of arguments, probability of separation, employment demands, future birth intentions and fertility decisions; and 3) normative influence variables such as age, age at marriage, marital duration, education, occupation, income, race, gender, religious preference, place of residence, number of children, sterilization, medical problems, chronic or debilitating disease, prior divorces, and having lived together before marriage. The later group of variables were placed into this category since all of these "statuses" have expectations attached to them which could influence marital coital frequency.

Attitudinal Variables

Because of space and time constraints, the NSFH survey used individual items, rather than the scales they were taken from, to measure certain attitudes and values. For instance, measures of such attitudes as gender role orientation, individualism, life satisfaction, well being, religiosity, locus of control, and self esteem were obtained

by using only certain items from existing scales. Since the codebooks did not provide information on which items should be grouped together, or where they were taken from, a factor analysis with varimax rotation was performed to determine if certain items might be combined for use as scales. The objective here was not the development of factor scales (outputing common factors for use in the analyses), but to develop factor-based scales. Factor-based scales are built by summing the variables which load highly on a certain factor, and omitting those which have insignificant loadings (Kim and Mueller, 1978).

Cronbach alphas for scale reliability were then computed for items loading highly on the same factor to determine if the newly constructed scale was indeed usable. The results of these analyses are discussed for each measure below.

Gender role orientation. Statements initially selected to measure gender role orientation included, "If husband and wife both work full time, they should share household chores equally" (GENDER01), "Parents should encourage just as much independence in their daughters as in their sons" (GENDER02), and "It is much better for everyone if the man earns the living and the woman takes care of the home and family" (GENDER3A). Degree of agreement or disagreement was assessed using a five part Likert scale which ranged from strongly agree to strongly disagree. The three items were

factor analyzed. After varimax rotation, the factor scores were .64, .76, and .12 respectively, with a Cronbach alpha of .01. Thus, these items were not usable as a scale.

Individualism. Individualism was initially measured using a Likert type scale with responses ranging from strongly agree to strongly disagree with the following statements: "In a successful marriage, the partners must have freedom to do what they want individually" (INDIVID1), and "It is better for a persons to get married than to go through life single" (INDVD2A). These items were factor analyzed. After varimax rotation the factor scores were .09 and .86, with a Cronbach alpha of .08. Thus, these items were not usable as a scale.

While factor analysis suggested that the gender role and individualism items were not usable as scales, the first two items used to measure gender role orientation did scale moderately with the first item used to measure individualism. But even after varimax rotation the factor scores were only .64, .76, and .58 respectively, and the alpha was still an unacceptably low .43.

The factor analysis also suggested that the third gender role item and the second individualism item possessed commonality. Factor scores were .73 and .86 respectively, but the Cronbach alpha was .56, well below the .80 or above recommended by Carmines and Zeller (1979).

It was concluded that the items did not form useful scales. Thus, the decision was made to use individual items rather than scales to measure gender role orientation and individualism.

Life Satisfaction. Life satisfaction (WELLBENG) is measured by a single item, "Taking all things together, how would you say things are these days?" Responses include very unhappy (1), unhappy (2), somewhat unhappy (3), neither happy nor unhappy (4), somewhat happy (5), happy (6), and very happy (7). Fifty percent of the respondents answered happy or very happy, with only five percent being unhappy or very unhappy, and the remaining 45 percent falling somewhere in the middle.

Well being. Twelve items comprise the well being scale used here (WELBNGSC). Respondents were asked how many days during the past week they experienced the following: 1) felt bothered by things that usually didn't bother them; 2) had a poor appetite; 3) felt they couldn't shake off the blues; 4) had trouble keeping their minds on what they were doing; 5) felt depressed; 6) felt as though everything they did was an effort; 7) felt fearful; 8) slept restlessly; 9) talked less than usual; 10) felt lonely; 11) felt sad; and 12) felt they could not get going. Responses ranged from zero days to seven days. Items were summed to arrive at an overall well being score. Factor scores ranged from .69 to

.92. The Cronbach alpha for this scale was a very acceptable .92.

Religiosity. Religiosity (RELIGSC) is measured by a three-item scale which assessed respondents degree of agreement with the following items: 1) The Bible is God's word and everything happened or will happen exactly as it says; 2) I regard myself as a religious fundamentalist; and 3) The Bible is the answer to all important human problems. Responses ranged from one (strongly agree) to five (strongly disagree). Factor analyses revealed that all three items loaded highly on a common factor (.87, .80, and .88 respectively). Cronbach alpha for the scale was .83. Thus, the decision to use the scale rather than individual items was justified.

Locus of control. Locus of control (LOCUS) is measured by a single item, "I have always felt pretty sure that my life would work out the way I wanted it to." Responses are the same as for religiosity. While this item is conceptually similar to self esteem and loaded moderately on the same factor as the self esteem items, the decision was made to retain it as a separate construct, since it deals with one's feelings of control over one's life, while the self esteem items deal with one's feelings of worth, especially compared to others. Moreover, the literature suggests that while highly correlated, locus of control and self esteem are separate constructs.

Self esteem. Self esteem (SELFWTSC) is measured by a three-item scale containing such items as: 1) I am able to do things as well as other people; 2) On the whole I am satisfied with myself; and 3) I feel that I am a person of worth, at least on an equal plane with others. Again, responses range from one (strongly agree) to five (strongly disagree). These items loaded on the same factor, .71, .79, and .60 respectively. Cronbach alpha for the scale was .72. While not quite at the level advocated by Carmines and Zeller, it is so close that the decision was made to use it anyway.

Marital Interaction Variables

Marital happiness. Marital happiness (MARITALH) is assessed by asking respondents how they would currently describe their marriage. Responses on a seven-item Likert scale range from one to seven. The greater the value, the greater the marital happiness. Seventy percent of the respondents considered their marriages happy or very happy, with only 4 percent being unhappy or very unhappy, and the other 26 percent falling somewhere in the middle.

Violence. The violence (VIOLENCE) variable reflects whether or not arguments between husband and wife became physical during the past year. Positive responses were assigned a value of 1, negative responses a value of 0.

Number of arguments. This variable reflects the respondent's subjective assessment of number of times in the

past year he or she has argued with his or her spouse over certain issues. Responses include never, less than once a month, several times a month, about once a week, several times a week, and almost everyday. Values range from one to six. Separate questions were asked concerning household tasks (WHYARGU1), money (WHYARGU2), spending time together (WHYARGU3), sex (WHYARGU4), having a(nother) child (WHYARGU5), in-laws (WHYARGU6), and children (WHYARGU7). While factor analyses indicated that these items scaled well together, the decision was made to treat them as separate, since the variable regarding arguments over sex was of special interest to this research.

Previous separation. Previous separation (PREVSEPR) reflects whether or not the couple has ever lived apart from each other during their current marriage because of disagreements. Positive responses were assigned a value of 1, negative responses a value of 0.

Probability of separation. Probability of separation (PROBSEPR) reflects the respondent's subjective perception of how probable it is that he or she will separate from his or her spouse. Values range from one to five, with one reflecting low probability of separation and five reflecting high probability of separation.

Hours worked. Hours worked (HOURSWRK) is the number of hours a week the respondent usually works. This variable is continuous, with values ranging from zero to 94.

Same schedule. This variable (SAMESCHD) reflects whether or not respondents work the same shift or schedule each week. Positive responses are assigned a value of 1, negative responses a value of 0.

Sterilized. This measure (STERILIZ) reflects whether or not the respondent and/or spouse has had an operation which makes it impossible for them to have a(nother) child. A value of 1 reflects a positive response, a value of 0 reflects a negative response.

Add child. This variable (ADDCHILD) reflects the respondent's intentions to have a(nother) child sometime in the future. Positive responses are assigned a value of 1, negative responses a value of 0.

Live apart. This measure (LIVEAPRT) reflects whether or not the respondent and his or her spouse live apart. If the spouse lives elsewhere then a value of 0 was assigned. If the spouse lives with the respondent, a value of 1 was assigned.

Marital trouble. This variable (MARRTROU) reflects the respondent's subjective assessment of whether or not he/she has felt that the marriage might be in trouble over the past year. Positive responses are coded 1, negative responses coded 0.

Alcohol/Drug use. Alcohol/Drug use (ALCHDRUG) reflects the respondent's subjective assessment of whether anyone in

the household has an alcohol or drug problem. Positive responses are coded 1, negative responses are coded 0.

Fairness in chores. This variable (FAIRCHOR) assesses the respondent's subjective assessment of the fairness in his or her relationship regarding household chores. Responses include very unfair to me, somewhat unfair to me, fair to both, somewhat unfair to spouse, very unfair to spouse. Values range from one to five. Low values indicate that the respondent feels that he or she is treated unfairly, high values indicate that the respondent feels that the spouse is treated unfairly.

Fairness in employment. Fairness in employment (FAIRWORK) reflects the respondent's subjective assessment of the fairness in his or her relationship regarding paid employment. Responses and values are the same as for the fairness in chores variable.

Fairness in spending money. Fairness in spending money (FAIRMONY) assesses the respondent's subjective assessment of the fairness in his or her relationship regarding spending money. Responses and values are the same as for the preceding variables.

Fairness in child care. Fairness in child care (FAIRCHLD) reflects the respondent's subjective assessment of the fairness in his or her relationship regarding child care. Possible responses and values are identical to the other fairness variables.

Shared activities. Shared activities (SHAREACT) reflects the amount of time the respondent has spent alone talking or sharing an activity with his or her spouse during the past month. Responses range from never to almost every day. Values range from one to six, with low values indicating little time spent in shared activities, and high values indicating a great deal of time spent in shared activities.

Normative Influence Variables

Age. Age (RSPNDAGE) is the respondent's age in whole years at last birthday. Values of this variable range from 18 to 97.

Age at marriage. Age at marriage (AGEMARR) is the respondent's age in years at the time of the current marriage. Originally coded in century months, values were divided by twelve to arrive at years.

Time married. The length of time married (TIMEMARR) was obtained by subtracting respondent's current marriage date in century months from the interview date in century months and dividing by 12.

Education completed. Education completed (EDUCATCP) reflects the highest level, in years, of education completed by the respondent. Values for this continuous variable range from zero (no formal education) to 20 (doctorate or professional degree).

Socioeconomic status. Socioeconomic status (SOCIOSTA) is represented by the total based occupational socioecomonic index. These scores are based solely on occupation, and do not reflect industry type, education or income level. The coding is taken from Stevens and Cho's, "Socioeconomic Indexes and the 1980 Census Occupational Classification Scheme". Scores for this continuous variable range from 13.98 to 90.45, with higher scores indicating higher socioeconomic status. Persons who were unemployed were assigned to the mean.

Total family income. This continuous variable (TOTFAMIN) represents the total family income in dollars from all sources for the previous year.

Ethnicity. The values of ethnicity (ETHNIC) are based on respondent's self identification. Possible categories included black, white, Mexican (chicano), Puerto Rican, Cuban, Other Hispanic, Native American, Asian, and other. For some analyses, this variable was dichotomized into white or nonwhite, with whites coded as 1, nonwhites coded as 0.

Gender. The gender variable (GENDERXX) is a dichotomous variable with males coded as 1 and females coded as 0.

Religion. Originally, this variable (RELIGON1) contained 64 categories, encompassing the full range of religious preference mentioned by the respondents. For ease

of analysis, it was recoded to reflect five categories: Jewish, Protestant, Catholic, other, and no religion.

SMSA. SMSA (SMSA_NOT) is a dichotomous variable coded 1 if the respondent resides in a Standard Metropolitan Statistical Area, otherwise coded 0.

Regional. This categorical variable (REGIONAL) describes the area of the country that respondent lives in. Possible values include Northeast, North Central, South, and West.

Number of preschool children. This variable (CHILD0_4) represents the number of children residing in the household at the time of the interview who were biological children, step-children, adopted, foster children, or children of lover/partner, and who were between the ages of zero and four.

Number of school-age children. Number of school-age children (CHLD5_18) represents the number of children falling into the above categories who were residing in the household at the time of the interview, and who were between the ages of five and eighteen.

Prior cohabitation. This dichotomous variable (COHAB) reflects whether or not respondent cohabited with his or her current spouse before their marriage. Those who cohabited were coded as 1, those who did not as 0.

Times married. Times married (TIMESMAR) reflects the total number of times respondent has been married, including

the current marriage. Values range from one to six.

Chronic. This dichotomous variable (CHRONIC) is coded 1 if either respondent or spouse has a chronic illness, 0 if not.

Health status. Health status (HEALTHST) reflects the self assessed health of the respondent compared to other people his or her age. Values on a five-point scale range from very poor (one) to excellent (five).

Currently employed. This dichotomous variable (CURREMPL) is coded 1 if the respondent is currently employed, 0 if not. Persons who have never worked or are not currently looking for work are excluded from this variable, since the aim of using it is to determine the effect of unemployment upon marital coitus.

Additional considerations. For all independent variables, missing values were assigned the mean value. When normality, skewness, or kurtosis presented a problem, the appropriate transformations were done, and the analyses completed based upon these values.

Data Analysis

The data were analyzed using SPSS-X, SAS, and the structural portion of the LISREL program (Joreskog and Sorbom, 1984). Descriptive measures such as frequencies, means, and standard deviations were obtained for all variables, and bivariate correlations were performed to

check the direction and significance of these relationships. Correlations, means, and standard deviations are presented in the appendix.

The model depicted in Figure 3-2 was analyzed using simultaneous equations that were estimated by utilizing the structural portion of the LISREL (LInear Structural RELationships) program developed by Joreskog and Sorbom (1984). The full LISREL model combines features of factor analysis and multiple regression for studying both measurement and structural properties of models (Lavee, 1988). The structural portion of LISREL estimates the causal relationships among variables, while the measurement model uses observed variables to measure unobserved constructs. The full LISREL model is not appropriate here since the data are not suited to estimating a measurement model for several reasons. First, the covariance between observed variables necessary for estimating a measurement model is lacking. Secondly, many of the constructs were composed of one-item indicators. Finally, while the model involves three main processes which could be considered latent constructs, the variables comprising each process were too diverse to use as a single construct. Thus, the structural portion of the LISREL computer program was used to estimate a system of simultaneous equations using only observed variables. Although a drawback to this approach is that it assumes perfect measurement, it facilitates the

exploration of structural relationships similar to the unobserved variable approach (Joreskog and Sorbom, 1984; Lavee, 1989).

Simultaneous equations represent an advance over conventional regression and path modeling (Lavee, 1988). First, regular regression and path analysis assume that residuals and errors are uncorrelated, while simultaneous equations are not limited by this assumption. Secondly, path analysis is simply a series of successively estimated equations, while the use of LISREL enables us to estimate all parameters simultaneously. Finally, nonrecursive (or feedback) relationships which are extremely difficult to handle with path analysis are estimated easily with simultaneous equations.

Several statistics exist for assessing the goodness of fit of simultaneous equation models. The use of simultaneous equations also allows coefficients to be estimated, and provides t-tests for assessing statistical significance, much like regular regression. Statistics similar to R-square are also given. Additionally, the LISREL program presents diagnostic information on the model, suggesting modifications that would improve the fit of the model to the data. Thus the theory and data can be used interactively, and a model which is both theoretically and statistically sound developed.

The use of simultaneous equations is advantageous since we can now look at the separate effect of each of the variables, examine feedback relationships, and estimate a coefficients for both a variable's effect on marital coital frequency and marital coital frequency's effect back on it; tasks that previous research has not been able to accomplish.

For the second portion of the data analysis, several analyses were performed. Since one aim of this project was to determine whether the relationship of the independent variables to the dependent variable was linear, a multiple regression model was run to see which variables were predictive in a linear model.

Next, the dependent variable was divided into the three categories discussed earlier: high, average, and low. In order to determine if predictors were different for those who deviate from average, several discriminant analyses were performed. Discriminant function analysis is used to find the dimension or dimensions along which groups differ and to find classification functions to predict group membership (Tabachnick and Fidell, 1989). This technique can also be used to identify which variables contribute to making the classification (Affifi and Clark, 1984), although for reasons discussed in Chapter 6, this could not be done using this data set. Using SAS, discriminant analysis also allows one to determine the percentage of observations correctly

categorized by the classification function. If the predictors of marital coital frequency vary dramatically using multiple regression and discriminant function analysis, then we can assume that the relationship is nonlinear.

First, an analysis utilizing all three categories was performed, in order to determine if one function could be used successfully to predict differences in coital frequency. If one function could be used to predict membership in the three categories well, then the implications would be that the same variables were predictive of all three categories. Next, persons with average levels of coital frequency were compared to persons at low and high levels in two separate analyses, to see if any differences existed in percent correctly classified when two rather than three categories of dependent variable were used.

Because the variance-covariance matrices for each of the three levels of coital frequency differed so greatly, discriminant analysis could not be used to determine which variables contributed to making classifications. Thus, logistic regression was performed to determine which variables contributed to classification, to determine direction, and also to confirm the results of the discriminant function analysis.

Originally, each independent variable was to be plotted against the dependent variable to determine if threshold effects existed. Because of the large number of observations in the data set, however, graphs of this nature proved to be unreadable.

Summary

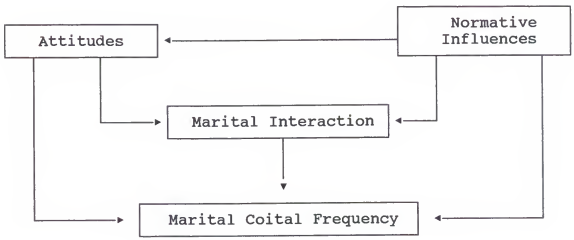
In this chapter, the data set used in the analysis is described, and its suitability for use in this project defended. This is followed by a brief description of the sample employed here. The dependent variable is then presented, the problems with its use pointed out, and attempts at solving these problems made. Each of the independent variables is empirically defined, and the chapter concludes with a brief description of the types of analyses carried out in Chapters Five and Six. Chapter Five deals with testing the theoretical model, while Chapter Six is concerned with assessing the differences between persons at average and high or low levels, and determining whether the relationships of the independent variables to coital frequency are best described as linear or nonlinear.

CHAPTER FIVE
CORRELATES OF MARITAL COITAL FREQUENCY: FINDINGS AND DISCUSSION

As pointed out earlier, previous studies of marital coital frequency have been handicapped in two ways. They have used limited, unrepresentative samples, and they have typically used methods of analysis which have made it difficult to test complex models simultaneously. Because the data set used here is a nationwide, random data set, it represents an advance over previous studies. Likewise, the use of LISREL to estimate simultaneous equations makes testing a complex model easier, since all equations can be estimated at the same time, and since feedback and indirect relationships can be accounted for.

In this chapter the model proposed in Chapter Three is tested using simultaneous equations modeling. The effects of theoretically identified variables upon coital frequency are tested, as well as many of their interconnections and interrelationships. Figure 5-1 contains the model tested here. One will soon note that it differs somewhat from the theoretical model presented earlier. Because the data set is so large and contains so many variables, the LISREL program was not able to handle all 52 of the them. Thus, the decision was made to use a subset of the original

variables. Many of the feedback relationships in the conceptual model are also not presented in Figure 5-1 for the same reason.



Variable List

Attitudinal Variables:	Interactional Variables:	Normative Influence Variables:
Life Satisfaction	Marital Happiness	Age
Psychological Well Being	Probability of Separation	Education
Religiosity	Plans to Have Child	Income
Gender Role Beliefs	Living Apart	Number of Children
Individualism	Fairness of Child Duties	Cohabiting Before Marriage
	Sharing Activities	Health Status
	Arguing About Sex	Employment Status
	Physical Violence	

Figure 5-1: Tested Model of Marital Coital Frequency

Variables were selected for this portion of the analysis based upon three criteria: the strength of their bivariate correlation with marital coital frequency, the strength of their correlation to other relevant variables in the model, and their use in past empirical and theoretical work. A list of these variables is presented at the bottom of Figure 5-1. When two variables were very similar to one another (see Appendix for correlation table), the variable which made the most sense given past empirical work was chosen. For example, respondent's age, age at marriage, and length of marriage were all highly correlated. The decision was made to use age since it is mentioned most in the empirical literature, and since its relationship with coital frequency is strongest of the three. Because a subset of the original variables was used here, some of the hypotheses listed in Chapter Three are not tested in the LISREL model, since they lacked the statistical strength to meet the inclusion criteria listed above.

The model presented in Figure 5-1 is very similar to the model presented in Chapter Three, but with one important change--no feedback arrows are shown. Since all relationships could not be estimated, it made sense to begin the analysis by looking at one-way relationships and to add the feedback relationships if the LISREL program suggested them, and if they also made good sense given existing theory and research. Indeed, one advantage to using the LISREL

Table 5-1: Results of the Test of the Model of Marital Coital Frequency

Endogenous Variable	Antecedent Variable	Unstandardized Coefficient	Standardized Coefficient	t	R^2
LIFE SATISFACTION:					
	INDIVIDUALISM	-.089	-.078	-5.641*	
	# OF CHILDREN	-.058	-.060	-4.393*	
	HEALTH STATUS	.307	.208	15.130*	
					.050
WELL BEING:					
	LIFE SATIS.	.361	.283	19.750*	
	MARITAL HAPP.	.067	.059	4.030*	
	AGE	.008	.080	5.281*	
	EDUCATION	.057	.107	7.949*	
	# OF CHILDREN	-.021	-.017	-1.233	
	COHABIT	-.199	-.058	-4.345*	
	HEALTH STATUS	.288	.153	11.278*	
	EMPLOYED	.296	.089	6.408*	
					.184
RELIGIOSITY:					
	LIFE SATIS.	.188	.076	5.425*	
	WELL BEING	-.120	-.062	-4.355*	
	EDUCATION	-.253	-.243	-17.250*	
	INCOME	-.006	-.083	-6.146*	
	# OF CHILDREN	.096	.040	3.080*	
	COHABIT	-1.082	-.161	-12.115*	
	EMPLOYED	-.280	-.043	-3.128*	
					.124

Table 5-1--Continued

Endogenous Variable	Antecedent Variable	Unstandardized Coefficient	Standardized Coefficient	t	R^2
GENDER ROLE TRADITIONAL:					
	RELIGIOSITY	.103	.262	19.810*	
	AGE	.015	.193	12.930*	
	EDUCATION	-.060	-.147	-10.725*	
	# OF CHILDREN	.069	.074	5.809*	
	COHABIT	-.150	-.057	-4.292*	
	HEALTH STATUS	-.034	-.023	-1.876	
	EMPLOYED	-.168	-.066	-4.828*	
					.207
INDIVIDUALISM:					
	AGE	-.016	-.220	-14.709*	
	EDUCATION	.028	.075	5.350*	
	COHABIT	.113	.048	3.372*	
	EMPLOYED	.003	.001	.080	
					.069
MARITAL HAPPINESS:					
	LIFE SATIS.	.406	.364	28.510*	
	INDIVIDUALISM	-.066	-.052	-4.135*	
	SHARE ACTIVITY	.229	.242	18.402*	
	VIOLENCE	-.190	-.037	-3.144*	
	AGE	-.006	-.065	-4.538*	
	EDUCATION	-.021	-.044	-3.558*	
	# OF CHILDREN	-.002	-.002	-.116	
	HEALTH STATUS	.026	.016	1.299	
	EMPLOYED	-.139	-.048	-3.599*	
					.249

Table 5-1--Continued

Endogenous Variable	Antecedent Variable	Unstandardized Coefficient	Standardized Coefficient	t	R^2
PROBABILITY OF SEPARATION:					
	LIFE SATIS.	-.149	-.247	-16.322*	
	WELL BEING	-.050	-.106	-6.926*	
	GENDER TRAD.	-.005	-.008	-.527	
	INDIVIDUALISM	.045	.065	4.382*	
	ARGUE OVER SEX	-.127	-.188	-5.086*	
	AGE	-.007	-.144	-8.334*	
	COHABIT	.132	.081	5.806*	
	EMPLOYED	.081	.051	3.378*	
					.200
ADD CHILD:					
	LIFE SATIS.	.005	.019	1.310	
	GENDER TRAD.	.009	.034	2.299	
	INDIVIDUALISM	-.014	-.047	-3.238*	
	MARITAL HAPPINESS	.005	.023	1.424	
	SEPARATION	-.018	-.044	-2.905*	
	FAIR CHILDCARE	-.013	-.062	-3.678*	
	AGE	-.006	-.270	-17.599*	
	# OF CHILDREN	-.068	-.281	-16.281*	
					.112
LIVE APART:					
	INDIVIDUALISM	.004	.033	2.305	
	EDUCATION	.002	.046	3.130*	
	INCOME	.000	.049	3.424*	
	# OF CHILDREN	.004	.046	3.292*	
					.080

Table 5-1--Continued

Endogenous Variable	Antecedent Variable	Unstandardized Coefficient	Standardized Coefficient	t	R^2
FAIRNESS IN CHILDCARE:					
	GENDER TRAD.	-.011	-.009	-.753	
	INDIVIDUALISM	-.002	-.001	-.115	
	AGE	-.011	-.111	-8.353*	
	# OF CHILDREN	.648	.568	48.002*	
	COHABIT	.001	.000	.025	
	EMPLOYED	.191	.061	5.204*	
					.397
SHARE ACTIVITY:					
	LIFE SATIS.	.207	.175	12.881*	
	WELL BEING	.071	.077	5.367*	
	ADD CHILD	.205	.044	3.238*	
	LIVE APART	-1.881	-.152	-12.294*	
	FAIR CHILDCARE	-.112	-.114	-7.163*	
	AGE	.009	.089	5.699*	
	EDUCATION	.024	.048	3.708*	
	# OF CHILDREN	-.195	-.173	-10.450*	
	COHABIT	-.037	-.012	-.863	
	EMPLOYED	-.095	-.031	-2.217	
					.183

Table 5-1--Continued

Endogenous Variable	Antecedent Variable	Unstandardized Coefficient	Standardized Coefficient	t	R^2
ARGUMENTS OVER SEX:					
	LIFE SATIS.	-.002	-.002	-.111	
	WELL BEING	-.081	-.116	-7.799*	
	SEPARATION	.554	.376	10.196*	
	AGE	-.009	-.131	-7.924*	
	# OF CHILDREN	.036	.043	2.949*	
	COHABIT	-.065	-.027	-1.871	
	EMPLOYED	.087	.037	2.597*	
					.096
VIOLENCE:					
	LIFE SATIS.	-.004	-.020	-1.370	
	WELL BEING	-.015	-.085	-5.777*	
	SEPARATION	.045	.124	8.429*	
	ARGUE SEX	.028	.114	7.871*	
	AGE	-.001	-.055	-3.777*	
	COHABIT	.020	.034	2.383*	
					.067

Table 5-1--Continued

Endogenous Variable	Antecedent Variable	Unstandardized Coefficient	Standardized Coefficient	t	R^2
COITAL FREQUENCY:					
	LIFE SATIS.	.051	.045	3.348*	
	WELL BEING	.004	.005	.359	
	GENDER TRAD.	.037	.032	2.381*	
	INDIVIDUALISM	-.012	-.010	-.740	
	MARITAL HAPP.	.104	.102	7.612*	
	ADD CHILD	-.003	-.001	-.048	
	LIVE APART	1.007	.085	7.192*	
	FAIR CHILDCARE	.009	.009	.621	
	SHARE ACTIVITY	.155	.162	12.212*	
	VIOLENCE	.134	.026	2.188	
	AGE	-.043	-.470	-31.469*	
	EDUCATION	-.004	-.009	-.719	
	INCOME	.000	.005	.447	
	# OF CHILDREN	.074	.069	4.380*	
	COHABIT	.110	.036	2.921*	
	HEALTH STATUS	.079	.047	3.749*	
	EMPLOYED	.127	.043	3.331*	
					.316

MODEL FIT:

TOTAL COEFFICIENT OF DETERMINATION	.696
x^2 WITH 93 d.f.	171.49
ADJUSTED GOODNESS OF FIT INDEX	.997
ROOT MEAN SQUARE RESIDUAL	.026

* p<.01

program to estimate simultaneous equations is that one may use the modification indices which LISREL provides to revise the model. Thus, while the analysis began with a slightly different model than the one presented in Chapter Three, it went through many iterations, and many of the relevant feedback relationships shown in the theoretical model are estimated in the final statistical model. This model is not presented pictorially, however, since the feedback relationships between individual variables, rather than processes, were estimated. To summarize, while the model presented here may seem simplistic, it is only the initial model, and the final model contains many interconnections and feedback relationships too complex to picture.

Results

The results of the model test are presented in Table 5-1. The results are presented in three sections. First, the effects of other variables upon the attitudinal variables are presented. Then their effects upon the marital interaction variables are displayed. Finally, the variables affecting coital frequency are considered. While the effects of the other classes of variables upon attitudes and marital interaction have been dealt with only briefly in the theoretical chapter, the results are organized in this way to facilitate understanding. In addition to replicating previous findings on the effects of these variables upon

marital coital frequency, it was interesting to note their effects upon each other. Thus, while the effects of normative influences, attitudes and marital interaction on marital coitus are the main focus here, the other interconnections were estimated simply for exploratory purposes--to determine their interconnections and their places in the model. Since the sample is so large, and thus small differences may appear statistically significant while having little substantive effect (Agresti and Finlay, 1983), the significance level was set at $p<.01$.

As can be seen from the table, the attitudinal variable of life satisfaction is negatively affected by another attitudinal variable, individualism (B=-.09). None of the marital interaction variables have an effect upon life satisfaction, while number of children and health status, both normative influence variables, are significant predictors of life satisfaction. Generally, the more children one has, the lower the life satisfaction (B=-.06), and the better one's health, the greater one's life satisfaction (B=.208). The three variables taken together explain 5% of the variance in life satisfaction.

The next attitudinal variable of interest is well being. The largest effect on well being is that of the attitudinal variable life satisfaction (B=.28). The marital interaction variable of marital happiness (B=.06), also has a positive effect, albeit not a very large one. The

normative influence variables of age (B=.08), education (B=.11), health status (B=.15), and employment (B=.09), are all positively related to well being, while cohabiting before marriage is negatively related to well being (-.06). Combined, these variables explain 18 percent of the variance in well being.

Religiosity is the next attitudinal variable examined. Curiously, while life satisfaction is positively related to religiosity (B=.08), well being is negatively related (B=-.06). Number of children is positively associated with religiosity (B=.04), while education (B=-.24), income (B=-.08), cohabitation before marriage (B=-.16), and employment (B=-.04) are all negatively associated with religiosity. Twelve percent of the variance in religiosity is explained by these variables.

The attitudinal variable of gender role traditionality is strongly associated with religiosity (B=.26). That is, the more religious one is, the more gender role traditional one is likely to be. None of the marital interaction variables influence gender role traditionality significantly, while several of the normative influence variables do. Age (B=.19) and number of children (B=.07) are positively related to gender role traditionality, while education (B=-.15), cohabiting before marriage (B=-.06), and employment (B=-.07) are negatively related to gender role

traditionality. Together these variables explain 21 percent of the variance in gender role traditionality.

Individualism, like gender role traditionality, is affected by several of the normative influence variables. None of the other attitudinal or marital interaction variables have any significant impact upon it, however. Individualism is negatively affected by age (B=-.22), but positively affected by education (B=.08), and by cohabiting before marriage (B=.05). Together, these variables explain only 7 percent of the variance in individualism.

Next, the effects of the attitudinal and normative influence variables upon the marital interaction variables are examined. Marital happiness is influenced by all three classes of variables. The attitudinal variable of life satisfaction is very strongly related to marital happiness (B=.36), while individualism is mildly negatively related to marital happiness (-.05). Shared activity, an interaction variable, has a strong positive impact upon marital happiness (B=.24). Physical violence is negatively related to marital happiness (-.04). The normative influence variables of age (B=-.07), education (B=-.04) and employment (B=-.05) are all weakly related to marital happiness in a negative direction. Overall, these variables explain 25 percent of the variance in marital happiness.

Probability of separation is affected by all three classes of variables as well. Life satisfaction (B=-.25)

and well being (-.11) are negatively related to probability of separation, while individualism is positively related to probability of separation (B=.07). Surprisingly, the more arguments over sex a couple has, the lower the probability of separation (B=-.19). The normative variables of cohabiting before marriage (B=.08) and employment (B=.05) are positively related to probability of separation, while its relationship with age is negative (B=-.14). Together, these variables explain .20 of the variance in probability of separation.

Plans to have a(nother) child are affected by a variety of variables. Those who value individualism (B=-.05) are less likely to plan to add children, as are persons who have a high probability of separation (B=-.04), and those who feel that current childcare arrangements are unfair to themselves (B=-.06). Older persons (B=-.27), and those who already have one or more children (B=-.28) are also less likely to plan to have more children. Eleven percent of the variance in plans to have a(nother) child is explained by these variables.

Persons who live apart are more likely to have higher levels of education (B=.05), have higher incomes (B=.05), and to have more children (B=.05). Together these variables explain 8 percent of the variance in living apart.

Fairness in childcare is affected by age, number of children, and employment. The younger one is, the less fair

he or she feels that childcare is (B=.11). The greater the number of children present, the more childcare is perceived as unfair (B=-.57). Employed persons are also less likely to perceive childcare as fair to themselves (B=-.06). The combined variance explained by these variables is 40 percent.

Amount of shared activity is the next variable of interest. Persons who are satisfied with their lives (B=.18), and who have high psychological well being (B=.08) are more likely to share activities with their spouses. Marital interaction variables affecting shared activity are plans to add a child, living apart, and feelings of fairness in childcare. Persons who feel that childcare is fair (B=.11), and who plan to add a(nother) child (B=.04), are more likely to share activity, while those who live apart are less likely to share activity (B=-.15). Age, education, and number of children are significant normative influences upon shared activity. The older one is (B=.09) and the more education one has (B=.05), the more likely one is to share activity with his or her spouse. The greater the number of children in the family (-.17), the less activity one is likely to share with his or her spouse. Overall, eighteen percent of the variance in shared activity is explained by these variables.

Arguments over sex are significantly affected by well being, probability of separation, age, number of

children, and employment. Persons with lowered well being (B=-.12), and those who are likely to separate (B=.38), are more likely to argue over sex. Younger persons (B=-.13), persons with children (B=.04), and employed persons (B=.04) tend to have slightly more arguments over sex. Total variance explained by these variables is 10 percent.

Violence is also affected by a wide variety of variables. The attitudinal variable of well being is negatively related to violence (B=-.09). The interactional variables probability of separation (B=.12) and arguments over sex (B=.11) are positive predictors of physical violence. Older persons are less likely to become violent with their spouses (B=-.06), while those who cohabited before marriage are more likely to have episodes of physical violence (B=.03). Only seven percent of the variance in physical violence is explained by these variables.

Finally, the effects of all the other variables in the model upon the ultimate dependent variable, marital coital frequency, are examined. Life satisfaction, gender role traditionality, marital happiness, living separately, shared activity, age, number of children, cohabitation before marriage, health status, and employment status are all significant predictors of coital frequency.

Considering the attitudinal variables first, life satisfaction has a positive, though very modest, influence upon marital coital frequency (B=.05). The more satisfied

one is with his or her life, the greater the frequency of marital coitus, thus hypothesis IA2 in supported. While well being also has a positive impact upon marital coital frequency (B=.005), this effect is not significant. Hence, hypothesis IA3 is not supported. Gender role traditionality is positively related to marital coital frequency (B=.03), but this effect is very small, thus it provides only limited support for hypothesis IA1. Individualism, on the other hand, is not a significant predictor of marital coital frequency, although the relationship is negative as hypothesized in IB1. The relationship between religiosity and marital coital frequency is a complex one. While model diagnostics suggest that the relationship is reciprocal, this model can not be estimated. Thus, the error terms are allowed to correlate, meaning that these variables are highly associated, but that neither direction of causation nor association can be specified. Although based on previous theory and research there is strong reason to believe that the causal direction is from religiosity to marital coital frequency. In sum then, two of the five attitudinal variables are significant predictors of marital coital frequency.

Of the eleven marital interaction variables hypothesized to affect marital coital frequency, four are significant. Marital happiness is positively associated with coital frequency--the greater the marital happiness,

the greater the coital frequency (B=.10), thus providing support for hypothesis IIA1. Those who share activity also have greater levels of coital frequency (B=.16), as hypothesized in IIA3. Surprisingly, the relationship between violence and coital frequency while not statistically significant is also positive (B=.03), thus support for hypothesis IIB1 is lacking. Living apart from one's spouse is negatively related to coital frequency (B=.09), as hypothesized in IIB7. Plans to add children and fairness in childcare are not the significant predictors of marital coital frequency that they were predicted to be in hypotheses IIA2 and IIA4. Arguments over sex and probability of separation are strongly related to coital frequency, but since the model containing their feedback relationships with coital frequency can not be estimated, the error terms are allowed to correlate. Thus we know that an association exists, but we cannot predict causation, or determine strength of association.

Finally, of the thirteen normative influence variables hypothesized to affect marital coital frequency, five are significant. Age is negatively related to coital frequency (B=-.47), thus providing support for hypothesis IIIB1. Number of children is also a significant predictor of marital coital frequency (B=.07), although in the opposite direction than predicted in hypothesis IIIB7. Persons who cohabited with their marital partners before this marriage

(B=.04), who are in good health (B=.05), and who are employed (B=.04), all exhibit higher levels of marital coital frequency. While this is contrary to hypothesis IIIB11, which predicted that cohabitators would have lower rates of marital coital frequency, it does provide support for hypotheses IIIA5 and IIIB9. The relationships between education and income and marital coital frequency are insignificant, thus not supporting hypothesis hypotheses IIIA1 and IIIA3. The remaining relationships hypothesized in Chapter Three are not estimated, since they do not meet the inclusion criteria for the model described earlier. Together, the attitudinal, marital interaction, and normative interaction variables explain one-third of the variance in marital coital frequency. While over 60 percent of the variance in coital frequency is unexplained, it must be remembered that biological and psychological variables were left largely untouched in this study. Thus, for a model which included only sociological and social psychological variables, predicting 32 percent of the variance is actually quite good.

Goodness of fit indicators show that the model fits the data well. The total coefficient of determination, similar to an overall R^2, is a very high .70. X^2 is 171.49 with 93 degrees of freedom, thus the ratio of chi-square to degrees of freedom is less than 2:1, well within the ranges recommended by Lavee (1988) and Wheaton (1987). The

adjusted goodness of fit index is an acceptably high 1.00, while the root mean square residual is an acceptably low .03. While a few of the normalized residuals are over the 2.0 level recommended as indicative of good fit, none are over 3.0. None of the modification indices are over 10, and the plot of normalized residuals is almost vertical (Joreskog and Sorbom, 1984). Thus, all of these measures indicate that the model of marital coital frequency fit the data quite well.

Discussion

Since the model fits the data so well, the next question is, does it replicate previous work? The similarities and differences between these findings and earlier empirical work are examined below.

Looking back at Table 5-1 it becomes apparent that the model tested here provides some support for the existing literature and theory in this area. Marital dynamics and normative influences (other than demographics) have the most impact upon coital frequency, while attitudes and demographics have the least. Thus, coital frequency has less to do with one's attitudes, opinions, and place in the social structure, and more to do with the terms of marital interaction, and the normative influences that act to structure this interaction.

While only two of the attitudinal variables are significant in predicting coital frequency, all of the relationships are in the expected direction. Persons who are satisfied with life, who experience psychological well being, who are more gender role traditional and who value individualism less tend to have marital intercourse more than their dissatisfied, less traditional, and more individualistic counterparts. This suggests that while attitudinal variables are important, other types of variables are more important. There are several reasons why these variables may have so little impact, given their role in previous empirical and theoretical work. Differences in sampling and measurement may contribute to some of this incongruity. Another explanation may be that as gender roles change, and marital relationships become more egalitarian, attributes such as gender role traditionality and individualism become less an issue in marital interaction. A final explanation is that these variables, while acting as motivators, do not capture what really motivates persons to interact. That is, it is entirely possible that the strongest motivators to interact may be biological, and not social or psychological. On the other hand it also makes sense to speculate that there may be other, more powerful psychological motivators that have not been included in this study.

Some of the "non-findings" on the effects of attitudinal variables are also worth mentioning. Self esteem and locus of control, which Turner felt were the strongest motivators to interact were so insignificant in the bivariate analysis that they were not included in this portion of the analysis. This does not mean that Turner's theory has been disproven, since testing his theory was not an aim in the first place. It may mean, however, that the use of his theory as a sensitizing scheme is of limited usefulness in selecting the attitudinal motivators of sexual interaction in marriage.

The normative influences operate for the most part in the hypothesized directions. As expected, older persons and those in poor health have sex less than those who are younger and healthier. Like previous studies, education and income are not significant in predicting coital frequency. Persons who are employed tend to have higher coital frequencies, than those who are unemployed. This makes sense, since marital interaction is likely to be strained when one's spouse is unemployed, and this strain is likely to carry over into the couple's sex life.

Two of the normative influences were in directions opposite of those hypothesized. Persons who cohabited before marriage actually had higher rates of intercourse than those who did not cohabit, contrary to my predictions. Since these persons may be more individualistic, and less

prone to adhere to societal norms regarding marital status, they also may be less likely to have "normative" levels of coital frequency. Contrary to the findings of DeMaris and Leslie (1984), those who cohabit were no different from those who did not in terms of marital adjustment, but they may be qualitatively different in terms of sexuality. This suggests the possibility that there are some important differences between those who cohabit and those who do not.

Another finding that runs counter to intuition is that as the number of children rises, so does marital coital frequency. The logic here was that the more children one has the more cautious that one will be, and also the more children present, the fewer the uninterrupted opportunities for intercourse. In reality this relationship is probably reciprocal. That is, the more one has intercourse, the greater the odds of conceiving a child, and the more children one ultimately has.

Quite a few of the normative variables hypothesized to affect marital coital frequency never made it to this stage of the analysis. Occupational status, for example, was omitted since it is so closely related to education and income. Likewise, age at marriage and marital duration were omitted because of their high correlations with age. Ethnicity, gender, religion, and area of residence were such weak predictors that they failed to make it to the LISREL analysis as well. This suggests that as social norms become

less restrictive, these statuses have fewer restrictions imposed upon them, and thus become less important in predicting marital coital frequency than in previous studies. It must be noted, however, that no strong consistent effects of these variables were found in prior studies either.

The findings on the relationship between marital interaction and coital frequency are also interesting. While marital happiness and shared activity operated in the predicted directions, the other variables did not. Plans to add a(nother) child and feelings of fairness in childcare were actually negatively related to marital coital frequency, although these relationships were very small and statistically insignificant. As expected, those who live apart have less sex than those who live together.

The positive relationship between violence and marital coital frequency, while not attaining statistical significance, was also surprising. One would assume that persons in violent marriages would have a very influential reason not to have sex with their partners. This was not the case, however. Several explanations are possible. The positive relationship between violence and marital intercourse may be a symptom of the "cycle of violence" (Straus et al., 1980) that characterizes violent marriages. That is, persons in violent marriages may have intercourse more because of the honeymoon period that tends to follow

each outbreak of violence. These couples may not only fight with a passion, but make up with a passion as well. Another explanation might be that persons who are physically expressive in one area (violence) might be physically expressive in other areas as well (sexuality). Keep in mind, however, that the influence of violence on marital coital frequency is actually very weak, and could simply be a product of sample size.

Again, the "non-findings" in this area are interesting. Feelings of marital trouble, arguments, previous separations, and likelihood of future separation did not make it to this stage of the analysis, suggesting that the positive aspects of marital interaction--happiness, shared activity and fairness--may have more influence on coital frequency than the more negative aspects of marital interaction.

While 11 of the 17 predictors of coital frequency were significant, only marital happiness, shared activity and age had betas of over .10. This supports the earlier contention that the higher the quality and quantity of marital interaction, the higher the level of coital frequency. The finding on age is also not surprising, given its pivotal role in previous research and theory.

In this study, as in others, age is the variable driving the model. While other variables have moderate influences upon martial coital frequency, none come close to

having the impact that age does. Thus, the findings presented here should be interpreted with this in mind.

To summarize, the findings presented here suggest that having traditional attitudes and values, being satisfied with one's self and one's marriage, having both high quantity and high quality interaction with one's spouse, and belonging to categories which have social approval for having marital coitus are all related to coital frequency. By incorporating attitudinal, interactional, and normative influence variables into the analysis, one is better able to understand the complex phenomenon of marital coital frequency.

CHAPTER SIX
EXTREME LEVELS OF COITAL FREQUENCY: FINDINGS AND DISCUSSION

In Chapter Five a model of marital coital frequency was tested. In this chapter, the investigation is taken a step further. Specifically, the answers to several interrelated questions are sought. That is, are the predictors of marital coital frequency the same for all levels of frequency? Is the relationship linear or nonlinear? And finally, how do the findings on above or below average levels of coital frequency compare to the test of the model carried out in Chapter Five? In order to answer these questions, several models are tested. First, a multiple regression model is estimated to determine which variables are predictive in a linear model. Next, several categorical models are tested, and the results compared to those from the linear model. If the same variables act as predictors, and operate in the same manner, then one can conclude that the relationship is linear. If, on the other hand, the results of the linear and categorical models differ, one can conclude that the relationship is not linear, and that those at above or below average levels really are different from those at the mean. The results can then be compared to the theoretical model, and the implications discussed.

Results

A Linear Model

Table 6-1 displays the results of an OLS regression of all 52 independent variables upon marital coital frequency. Multiple regression assumes that the relationship between the independent variables and the dependent variable is linear, thus it provides a baseline against which to test assumptions of nonlinearity. The model estimated here has several shortcomings. First, given the intercorrelations of several of the independent variables, there is a strong possibility that multicollinearity exists. In order to correct this problem, a reduced model is also estimated, leaving out many of the highly correlated independent variables. Secondly, it is possible that interactions exist, especially between age and some of the other independent variables such as number of children, plans to add children, sterilization, gender role traditionality and so forth. Thus an interaction model is also tested. Finally, if the relationship between the independent variables and marital coital frequency is indeed nonlinear, then this model is inadequate. With these limitations in mind, the regression model is used simply for comparison with other models.

Table 6-1: Ordinary Least Squares Regression Of All Independent Variables Upon Marital Coital Frequency

Variable	Standardized Coefficient
GENDER ROLE TRADITIONALITY-1	.03
GENDER ROLE TRADITIONALITY-2	-.01
GENDER ROLE TRADITIONALITY-3	.02
INDIVIDUALISM-1	.01
INDIVIDUALISM-2	.01
LIFE SATISFACTION	.03
WELL BEING	.01
RELIGIOSITY	-.02
LOCUS OF CONTROL	-.02
SELF ESTEEM	-.02
MARITAL HAPPINESS	.08**
VIOLENCE	.04*
ARGUMENTS OVER HOUSEHOLD TASKS	-.01
ARGUMENTS OVER MONEY	.01
ARGUMENTS OVER TIME TOGETHER	-.01
ARGUMENTS OVER SEX	-.01
ARGUMENTS OVER HAVING CHILD(REN)	.03
ARGUMENTS OVER INLAWS	.01
ARGUMENTS OVER CHILDREN	-.01
PREVIOUS SEPARATION	.03
PROBABILITY OF SEPARATION	-.02
HOURS WORKED PER WEEK	-.01
SAME SCHEDULE EACH WEEK	-.01
STERILIZED	.08**
PLANS TO ADD CHILD(REN)	-.02
LIVE SEPARATELY	-.09**
MARITAL TROUBLE	-.06**
ALCOHOL OR DRUG PROBLEM	-.01
FAIRNESS IN CHORES	-.01
FAIRNESS IN EMPLOYMENT	-.01
FAIRNESS IN SPENDING MONEY	.02
FAIRNESS IN CHILD CARE	.02
SHARED ACTIVITY	.15**
RESPONDENT'S AGE	-.53**
AGE AT MARRIAGE	.04
LENGTH OF MARRIAGE	-.03
EDUCATION	.01
SOCIOECONOMIC STATUS	-.01
FAMILY INCOME	.01
ETHNICITY	-.01
GENDER	.01
RELIGION	.01
RURAL/URBAN RESIDENCE	-.02

Table 6-1--Continued

Variable	Standardized Coefficient
REGION	.01
PRESCHOOL CHILD(REN)	-.05**
SCHOOL AGE CHILDREN	.04*
COHABITATION BEFORE MARRIAGE	.02
TIMES MARRIED	.04*
CHRONIC ILLNESS	-.05**
HEALTH STATUS	.04**
EMPLOYED	.01
R^2	.34
ADJUSTED R^2	.33
n	5292
F	51.83**

*=significant at .01 level
**=significant at .001 level

The model's limitations should not be misinterpreted as indicating that the linear model is unimportant. It is important, for several good reasons. First, since the number of variables in the LISREL model had to be limited, this model, by including all of the empirically relevant variables, provides more information with which to explore the hypotheses not directly tested by the LISREL model. By estimating this model, the results of the LISREL model can be verified. If the results of the two models vary dramatically, then some explanation for this difference would be needed. If the linear model replicates the LISREL model, then we can place more confidence in the findings. Finally, the linear model provides a better baseline than

the LISREL model, since it includes all the relevant variables, and since it contains one set of estimates, rather than a system of estimates.

Thirteen of the variables are significant predictors of marital coital frequency, but only one, respondent's age (B=-.53), has a standardized beta of over .15. Again, age is the variable which drives the model, and other relationships should be viewed in light of this.

Of the attitudinal variables, none were significant. As in the LISREL model, attitudes had very little to do with marital coital frequency.

The interaction variables of marital happiness, shared activity, violence, sterilization, living separately, and marital trouble are all significant predictors of marital coital frequency. As expected, marital happiness (B=.08) and sterilization (B=.08) are positively related to marital coital frequency, and marital trouble (B=-.06) and living separately (B=-.08) are negatively associated with marital coital frequency. As mentioned earlier, because of the size of the data set, many of the statistically significant variables have only a minute substantive impact.

Six of the normative influence variables are significant. As expected, respondent's age (B=-.53) is very strongly negatively related to marital coital frequency. The more preschool children one has (B=.-05), the less likely one is to have intercourse, while the more school-age

children one has (B=-.04), the more likely one is to have intercourse. This suggests that as children age they become less of an intrusion upon their parent's sex lives. Since the two variables regarding number of children were combined in the LISREL analysis, this suggests that the findings in the last chapter were obscured by the way the variable was defined. Since there were more children of school age than of preschool age, the effect of school age children was overriding the effect of having preschool age children. Number of marriages is positively related to coital frequency (B=-.05). Those marriages in which either the respondent or spouse has a chronic disease have lower rates of coitus than those without chronic diseases (B=-.05), and those respondents in good health are more likely to have coitus than those in poor or fair health (B=.04).

To summarize, as with the LISREL model, age is driving the linear model. Shared activity is the next most important predictor, followed by living separately, having been sterilized, and marital happiness. Thus, in this analysis, as in the LISREL analysis, attitudes as motivators and to a lesser degree, normative influences, are less important predictors of coitus than is marital interaction.

This regression model explains .34 of the variance in marital coital frequency. Since an R-square of over .30 is relatively uncommon in the social sciences (Agresti and Finlay, 1983), the predictive power of the model is actually

quite good. The F-test of the null hypothesis that none of the independent variables is better at predicting marital coital frequency than using the mean of coital frequency is 51.83 (p=.0001). Thus the null hypothesis can be rejected and the conclusion drawn that at least one of the variables is better at predicting marital coital frequency than simply using the mean to predict rates of coitus.

Next, because of concerns over multicollinearity, a reduced model was estimated (Table 6-2), using only the variables significant at the .05 level or greater from the original model. While life satisfaction became significant, no other changes between the complete and reduced models were noted. All of the other variables remained significant and in the original direction. R^2 remained at .33, and an F-test comparing the two models yielded a value of 1.46 (p>.05), thus the null hypothesis that the two models are the same cannot be rejected, and we can conclude that the reduced model fits just as good as the complete model. It is interesting to note here that some of the variables chosen for this model were not chosen for inclusion in the LISREL model. Two reasons for this exist--different criteria were used for inclusion, and LISREL estimates systems of equations (the effects of several variables upon each other), while the linear model estimates the effect of one set of variables upon one outcome variable.

Finally, an interaction model (Table 6-3) which included interactions between age and the other independent variables was estimated. While the interaction terms for age and living separately, and age and shared activity are significant, neither is significant above the .01 level.

Table 6-2: Reduced Regression Model

Variable	Standardized Coefficient
GENDER ROLE TRADITIONALITY-1	.02
LIFE SATISFACTION	.03*
MARITAL HAPPINESS	.09**
VIOLENCE	.04*
ARGUMENTS OVER HAVING CHILD(REN)	.03
PREVIOUS SEPARATION	.02
STERILIZED	.07**
LIVE SEPARATELY	-.09**
MARITAL TROUBLE	-.07**
SHARED ACTIVITY	.16**
RESPONDENT'S AGE	-.53**
RURAL/URBAN RESIDENCE	-.03
PRESCHOOL CHILD(REN)	-.04*
SCHOOL AGE CHILDREN	.05**
TIMES MARRIED	.08**
CHRONIC ILLNESS	-.05**
HEALTH STATUS	.05**
R^2	.33
ADJUSTED R^2	.33
N	5292
F	146.52**

*=significant at .01 level
**=significant at .001 level

Table 6-3: Reduced Regression Model With Age Interactions

Variable	Standardized Coefficient
GENDER ROLE TRADITIONALITY-1	.06
LIFE SATISFACTION	.05
MARITAL HAPPINESS	.04
VIOLENCE	.03
ARGUMENTS OVER HAVING CHILD(REN)	-.01
PREVIOUS SEPARATION	.10*
STERILIZED	.19*
LIVE SEPARATELY	-.17**
MARITAL TROUBLE	-.01
SHARED ACTIVITY	.26
RESPONDENT'S AGE	-.17
RURAL/URBAN RESIDENCE	-.05
PRESCHOOL CHILD(REN)	-.16*
SCHOOL AGE CHILD(REN)	-.04
TIMES MARRIED	.07
CHRONIC ILLNESS	-.01
HEALTH STATUS	-.03
AGE*GENDER ROLE TRADITIONALITY	-.06
AGE*LIFE SATISFACTION	-.03
AGE*MARITAL HAPPINESS	.01
AGE*VIOLENCE	.00
AGE*ARGUMENTS OVER HAVING CHILD(REN)	.04
AGE*PREVIOUS SEPARATION	-.07
AGE*STERILIZED	-.12
AGE*LIVE SEPARATELY	.27*
AGE*MARITAL TROUBLE	-.06
AGE*SHARED ACTIVITY	-.20*
AGE*RURAL/URBAN RESIDENCE	.03
AGE*PRESCHOOL CHILD(REN)	.12
AGE*SCHOOL AGE CHILD(REN)	.09
AGE*TIMES MARRIED	.01
AGE*CHRONIC ILLNESS	-.03
AGE*HEALTH STATUS	.13
R^2	.34
ADJUSTED R^2	.34
N	5292
MODEL F	77.16**
F-TEST COMPARING COMPLETE AND REDUCED MODELS	2.62 (p>.05)

*=significant at .01 level
**=significant at .001 level

Since the sample size is so large, one would expect true significance to have a much lower p-value. This may mean that the interactions while statistically significant, are not substantively significant. This supposition is backed by a glance at the R-square for the interaction model. It differs by only one percent from the reduced model, thus the interaction model adds very little to the variance explained. When an F-test is done comparing the complete (interaction) model to the reduced model, the F-value is 2.62, which just misses significance at the .05 level. Finally, taking into account the difficulty of interpreting interaction models--the coefficients for the original variables are no longer interpretable (Agresti and Finlay, 1983)--the decision was made to go with the reduced model with no interaction terms.

When the reduced model without interactions is compared to the model tested in Chapter Five, we find that the variables contributing the most to the prediction of coital frequency in the structural equations model--age, shared activity, marital happiness, and living separately--are also the most important variables in the multiple regression model. While the major variables remain the same, suggesting that they may "drive" the model, many of the other variables differ. As mentioned earlier, this is not surprising, given that a slightly different set of variables was used in each of the final models, and given the fact

that nonlinear relationships, and differences in predictors at above or below average levels of coital frequency are expected. Thus, while the linear model provides some support for the structural equations model, some important differences also exist.

Having decided to use the reduced regression model as the linear baseline, the next step is to perform discriminant function analysis to determine if the same function can be used to accurately predict all three levels of coital frequency.

The Discriminant Analysis Model

Discriminant analysis techniques are used to classify individuals into one of two or more alternative groups on the basis of the values of the independent variables. Individuals are classified using a discriminant function developed from a measure of generalized squared distance. Discriminant analysis can also be used to identify which variables contribute to the classification (Afifi and Clark, 1984), and to determine what proportion of the population is correctly classified using a particular discriminant function.

Discriminant analysis is useful here since the independent variables can be used to classify persons into one of three groups and to determine how well the discriminant function developed from these variables

actually classifies the subjects. If one discriminant function classifies persons into the three groups equally well, then we can assume that the relationship is a linear one. On the other hand, if more than one discriminant function is needed, we can conclude that the relationship between the independent variables and marital coital frequency varies depending on the level of coital frequency.

Several discriminant analyses were performed using all 53 independent variables to classify persons into one of the three groups discussed in Chapter Four, low, average, or high. Recall that persons more than one standard deviation below the mean are considered to have low frequency, and those more than one standard deviation above the mean are considered to have high frequency.

Since discriminant analysis assumes that the three groups be of equal size, and this assumption is not met, proportional prior probabilities were used to take this imbalance into account. In addition to setting priors, one must also decide whether to base the analysis upon a pooled covariance matrix (using one covariance matrix to derive the discriminant function), or the within covariance matrices from each of the three categories. A requirement of using pooled covariance matrices is that the variances be roughly equal for all three groups. Discriminant analysis using pooled covariance matrices has the advantage of being more interpretable, and simpler to estimate--it estimates a

linear function as opposed to analyses using the within covariance matrices which estimate a quadratic function. When the within covariance matrices are used, coefficients for the independent variables cannot be obtained, thus one is unable to determine which of the variables are contributing to the classification, or how much an individual variable contributes. Using the within matrices, one is limited to examining the number and percentages of persons correctly classified using the quadratic discriminant function.

Thus, the first step in the analysis was to set the priors to proportional. The second was to run the Kendall and Stewart Likelihood Ratio Test to determine whether the pooled or within covariance matrices should be used. The results of this test are displayed in Table 6-4. The x^2 statistic yielded a value of 10543.35 (df=2862, p=.0001), thus the within matrices were used for this analysis. Because the within matrices are used, it is impossible to do as originally planned and determine which variables contribute most to classification.

Table 6-4 also contains the results of the discriminant function analysis performed using the within covariance matrices. Sixty-eight percent of lows are correctly classified, 76 percent of the norms are correctly classified, and 51 percent of the highs are correctly classified. Overall, the discriminant function used here

classifies 71 percent of the observations into the correct category.

Table 6-5 shows what happens when the pooled covariance matrix, rather than the within covariance matrices, is used. While 92 percent of the averages are correctly classified, only 48 percent of the lows and 9 percent of the highs are correctly classified. Thus, while using a pooled covariance matrix does a good job of classifying those with average levels of coital frequency, it does a poor job of classifying those at the extremes.

Table 6-4: Results Of Discriminant Analysis Using Within Covariance Matrices, Classes=3

Classified From:	Classified Into: Low	Average	High
LOW	512	212	28
	.68	.28	.04
AVERAGE	502	2874	403
	.13	.76	.11
HIGH	30	340	391
	.04	.45	.51
TOTAL	1044	3426	833
PERCENT	.20	.65	.15
PRIORS	.14	.71	.15

Total Correctly Classified 3777
Percent Correctly Classified .71
N=5292

Kendall and Steward Likelihood Ratio Test:
X^2=10543.35
DF=2862
p=.0001

Overall 74 percent of the sample are classified correctly. Recall that using the pooled covariance matrix assumes a linear model, while using the within covariance matrices does not. Thus, poor classification at the extremes of coital frequency indicates that the model is indeed nonlinear.

Since the analyses up to this point have used the same data to develop the classification function and to test it, one might question the validity of the discriminant function. One method of testing the validity of the

Table 6-5: Results Of Discriminant Analysis Using Pooled Covariance Matrix, Classes=3

Classified From:	Classified Into: Low	Average	High
LOW	363	386	3
	.48	.51	.01
AVERAGE	238	3494	47
	.06	.92	.02
HIGH	9	680	72
	.02	.89	.09
TOTAL	610	4560	122
PERCENT	.12	.86	.02
PRIORS	.14	.71	.15

Total Correctly Classified 3929
Percent Correctly Classified .74
N=5292

discriminant function is to use cross validation. This technique consists of randomly splitting the original sample from each group into two subsamples: one for deriving the discriminant function and one for cross validating it (Afifi and Clark, 1984). If a large percentage of the observations are classified correctly, the discriminant function is a valid one. Table 6-6 shows the results of performing this the cross validation procedure. Two-thirds of the data were used to develop the classification function, while one-third was used to validate it. The table shows that 73 percent of the lows, 81 percent of the norms, and 42 percent of the highs were correctly classified. Seventy-four percent of

Table 6-6. Results Of Discriminant Analysis Using Validation Data Set, Classes=3

Classified From:	Classified Into: Low	Average	High
LOW	369	122	12
	.73	.24	.03
AVERAGE	340	2041	152
	.13	.81	.06
HIGH	16	269	207
	.03	.55	.42
TOTAL	725	2432	371
PERCENT	.21	.69	.10
PRIORS	.14	.72	.14

Total Correctly Classified 2617
Percent Correctly Classified .74
N=3528

the total were correctly classified. Since the function does better at classifying the averages than the highs and lows, this is additional evidence that the relationship is nonlinear, and suggests that two, rather than one, discriminant functions may be needed.

Table 6-7 shows the results of using two discriminant functions, one to distinguish between low and average, and another to distinguish between average and high. Upon examining the first part of the table, we find that 68 percent of the lows and 87 percent of the highs are correctly classified, with an overall classification rate of 84 percent. The second portion of the table is similar. Fifty-two percent of the highs and 89 percent of the norms are correctly classified. The overall classification rate is 83 percent. Since the total correctly classified using two discriminant functions has risen 10 percent over using one discriminant function, we can conclude that the predictors distinguishing between low and average are different (or operate differently) than the predictors distinguishing high from average.

Table 6-7: Results Of Discriminant Analysis Using Within Covariance Matrices, Classes=2

Classified From:	Classified Into: Average	Norm
AVERAGE	512 .68	240 .32
NORM	504 .13	3275 .87
TOTAL PERCENT	1016 .22	3515 .78
PRIORS	.17	.83
Total Correctly Classified Percent Correctly Classified N=4531	3787 .84	

Classified From:	Classified Into: High	Average
HIGH	397 .52	364 .48
AVERAGE	419 .11	3360 .89
TOTAL PERCENT	816 .18	3724 .82
PRIORS	.17	.83
Total Correctly Classified Percent Correctly Classified N=4540	3775 .83	

To summarize, the discriminant analyses performed here suggest two things: that the relationship between coital

frequency and its predictors is nonlinear, and that the predictors operate differently as levels of coital frequency vary. This analysis has one major shortcoming, however. Because the within covariance matrices are used, we cannot tell which of the variables are contributing to the classification, or the magnitude of that contribution. Thus, the next step is to perform logistic regression analyses to determine the strength and direction of the relationship between the independent variables and marital coital frequency.

Logistic Regression Model

Logistic regression is a good choice here since it allows us to learn more about the relationships explored above. With logistic regression we can determine which variables contribute to the prediction of the dependent variable. Like discriminant analysis, logistic regression requires that the dependent variable be categorical. With logistic regression, however, the focus is predicting which category an observation will fall into based upon the independent variables, rather than determining how many persons are classified correctly.

Since the logistic regression equation is nonlinear, the coefficients cannot be interpreted in terms of unit changes in slope. While statements can be made about the direction of the relationship, and the significance of each

independent variable, we cannot use the coefficients to determine the amount of change in the dependent variable without first transforming them. One common method for interpreting the coefficients is to take the natural log of each. This gives the multiplicative estimate, or logit, which can be interpreted as the change in the odds for each one unit change in the independent variable. This is the method utilized here.

The decision was made not to estimate an interaction model in this section of the analysis. Several reasons exist for this. First, the issues here are nonlinearity and differences in predictors, rather than interactions between the variables. Secondly, when an interaction model was tested using linear regression, it added little to our understanding. Since the interaction model was not used in the linear model, it is not used here, as the results would not be comparable. Finally, the cost of estimating an interaction model using logistic regression is prohibitive. Given the focus of the research, the benefits of its estimation were outweighed by sheer financial costs.

Table 6-8 displays the results of the logistic regression model comparing persons with low frequencies to those who have average frequencies. Lows are coded 1, averages are coded 0. As in the previous analyses, none of the attitudinal variables are significant predictors of low coital frequency.

Table 6-8: Logit Model For Predicting The Likelihood Of Low Marital Coital Frequency

Variable	B	Multiplicative Estimate	p For X^2
INTERCEPT	.88		
GENDER01	.03	1.03	.70
GENDER02	.03	1.03	.61
GENDER3A	-.01	.99	.98
INDIVID1	-.08	.92	.11
INDVD2A	-.08	.92	.11
WELLBENG	-.04	.96	.34
WLBNGSC	.01	1.01	.58
RELIGSC	-.01	.99	.93
LOCUS	.08	1.08	.15
SELFWTSC	-.02	.98	.49
MARITALH	-.15	.86	.00
VIOLENCE	-.46	.63	.04
WHYARGU1	.07	1.07	.26
WHYARGU2	-.02	.98	.77
WHYARGU3	.02	1.02	.69
WHYARGU4	-.29	.75	.00
WHYARGU5	-.01	.99	.99
WHYARGU6	-.01	.99	.98
WHYARGU7	-.04	.96	.45
PREVSEPR	-.25	.78	.21
PROBSEPR	.29	1.33	.00
HOURSWRK	-.01	.99	.75
SAMESCHD	.12	1.13	.43
STERILIZ	-.96	.38	.00
ADDCHILD	.18	1.19	.43
LIVEAPRT	2.57	13.07	.00
MARRTROU	.42	1.52	.00
ALCHDRUG	-.04	.96	.85
FAIRCHOR	.03	1.03	.75
FAIRWORK	-.01	.99	.91
FAIRMONY	-.07	.93	.56
FAIRCHLD	-.05	.95	.24
SHAREACT	-.20	.82	.00
RSPNDAGE	.06	1.06	.10
AGEMARR	.01	1.01	.82
TIMEMARR	.02	1.02	.49
EDUCATCP	-.06	.94	.00
SOCIOSTA	.00	1.00	.53
TOTFAMIN	.00	1.00	.37
ETHNIC	.03	1.03	.83
GENDER	-.05	.95	.66
RELIGION	-.02	.98	.76
SMSA	.02	1.02	.88

Table 6-8--Continued

Variable	B	Multiplicative Estimate	p For X^2
REGIONAL	.03	1.03	.61
CHILD0_4	.21	1.23	.07
CHLD5_18	-.27	.76	.00
COHAB	.15	1.16	.31
TIMESMAR	.05	1.05	.64
CHRONIC	.83	2.29	.00
HEALTHST	-.07	.93	.27
CURREMPL	-.24	.79	.08

X^2=1105.49 D.F.=52
-2 LOG LIKELIHOOD=2762.11 (p=.00)
SOMERS D=.70
N=4349

Marital happiness is negatively associated with low coital frequency. That is, the less happy one is in his or her marriage, the more likely one is to have low coital frequency. Again, the relationship between violence and coital frequency is rather puzzling. The more violent one's marriage, the less likely one is to have low coital frequency. Arguing over sex is also inversely related to coital frequency. The more one argues over sex, the less likely one is to have low levels of marital coitus. A positive relationship exists between probability of separation and low coital frequency. The greater the likelihood of separation, the more likely the marriage is to have low levels of coitus. Persons who have been sterilized are less likely to have low rates of coitus. Persons living apart are more likely to fall into the low frequency

category than those who live together. Marital trouble is positively related to low coital frequency. That is, marriages in trouble are more likely to evidence low coital frequency. Finally, shared activity is negatively related to low coital frequency. The more couples share activity, the less likely they are to have low coital frequency.

Three of the normative influence variables are significant in predicting low coital frequency. Educational level is negatively associated with low coital rates. That is, the higher one's educational level, the less likely one is to be in a marriage with low levels of coital frequency. Having school age children is also negatively associated with low coital rates. Persons with school age children are less likely to be in marriages in which sex occurs infrequently. Finally, chronic illness is positively associated with low coital frequency. Marriages in which either the respondent or spouse has a chronic illness are more likely to have low rates of marital intercourse. Surprisingly, age was not a significant predictor of low coital frequency.

The model X^2 was 1105.49 (df=52), and the -2 log likelihood was 2762.11. Both were significant at the p=.001 level, indicating that the independent variables predict low coitus better than chance. Somers D, a measure analogues to R^2 in linear regression, was .70. These

measures indicate that the predictive power of the model is actually quite good.

Table 6-9 displays the results of the logistic regression comparing average levels of coital frequency (coded 0) to high levels (coded 1). Of the attitudinal variables, well being and self worth are significant predictors of high coital frequency. The higher the well being, the more likely a person is to have high rates of coitus in marriage. On the other hand, the more self worth or self esteem that one feels, the less likely one is to have high rates of marital intercourse.

Five of the marital interaction variables are significant predictors of high marital coital frequency. The greater the marital happiness, the more likely one is to have high rates of marital intercourse. The more one argues over sex, the less likely one is to fall into the high category, while the more couples argue over having another child and over in-laws, the more likely they are to have high rates of coitus. Finally, the greater the probability of separation, the more likely couples are to have high rates of marital intercourse.

Of the normative influence variables, being sterilized, sharing activities, having cohabitated before marriage, and being married before are all associated with increased probability of falling into the high category. Age, education, and living in an urban area as opposed to a rural

one were all negatively associated with high rates of marital coitus.

Table 6-9: Logit Model For Predicting The Likelihood Of High Marital Coital Frequency

Variable	B	Multiplicative Estimate	p For X^2
INTERCEPT	-2.23		
GENDER01	.15	1.16	.02
GENDER02	.02	1.02	.71
GENDER3A	.07	1.07	.10
INDIVID1	-.04	.96	.42
INDVD2A	-.01	.99	.99
WELLBENG	.08	1.08	.08
WLBNGSC	.01	1.01	.01
RELIGSC	-.02	.98	.16
LOCUS	-.07	.93	.24
SELFWTSC	-.11	.90	.00
MARITALH	.09	1.09	.05
VIOLENCE	.15	1.16	.36
WHYARGU1	.05	1.05	.37
WHYARGU2	.01	1.01	.91
WHYARGU3	-.04	.96	.44
WHYARGU4	-.13	.88	.01
WHYARGU5	.14	1.15	.03
WHYARGU6	.11	1.11	.04
WHYARGU7	-.03	.97	.44
PREVSEPR	.29	1.34	.06
PROBSEPR	.15	1.16	.04
HOURSWRK	-.01	.99	.77
SAMESCHD	.07	1.07	.53
STERILIZ	.33	1.39	.01
ADDCHILD	-.06	.94	.68
LIVEAPRT	-.36	.69	.55
MARRTROU	-.19	.83	.13
ALCHDRUG	-.22	.80	.32
FAIRCHOR	-.02	.98	.80
FAIRWORK	-.06	.94	.47
FAIRMONY	.19	1.21	.06
FAIRCHLD	-.02	.98	.63
SHAREACT	.29	1.34	.00
RSPNDAGE	-.12	.89	.03
AGEMARR	.07	1.07	.24

Table 6-9--Continued

Variable	B	Multiplicative Estimate	p For X^2
TIMEMARR	.03	1.03	.59
EDUCATCP	-.06	.94	.01
SOCIOSTA	.00	1.00	.79
TOTFAMIN	.00	1.00	.85
ETHNIC	-.01	.99	.98
GENDER	.03	1.03	.79
RELIGION	.04	1.04	.38
SMSA	-.21	.81	.03
REGIONAL	.04	1.04	.43
CHILD0_4	-.13	.88	.11
CHLD5_18	.06	1.06	.27
COHAB	.21	1.23	.04
TIMESMAR	.22	1.25	.02
CHRONIC	.22	1.25	.31
HEALTHST	.07	1.07	.25
CURREMPL	-.03	.97	.79

X^2=586.21 D.F.=52
-2 LOG LIKELIHOOD=3400.05 (p=.00)
SOMERS D=.53
N=4377

The model X^2 was 586.21 (df=52) and the -2 log likelihood was 3400.05. Both were significant at the .001 level, indicating that the model predicts high coital frequency better than chance. Somers D was .53.

Comparing the Models

In comparing the two models (see Table 6-10) we find that six of the predictor variables are common to both, while the first model (predicting low coital frequency) has five variables not found in the second model (predicting

high coital frequency), and the second model contains eight variables not found in the first. Marital happiness is a significant predictor of both high and low frequency. Low levels of coital frequency are associated with low levels of marital happiness, while high levels of coitus are associated with high levels of marital happiness. Arguments over sex is another predictor that the two equations have in common. Persons who argue over sex are less likely to fall into either the low or high categories. In other words, persons who argue over sex frequently are more likely to fall into the middle category than either of the extreme categories. Probability of separation is another common predictor. High probability of separation is predictive both of low and high levels of coitus. That is, persons who have average levels of coitus are less likely to separate than those with either very high or very low levels. Being sterilized is also predictive of both extremes. Persons who are sterilized are less likely to have low than average levels, and more likely to have high than average levels. Sharing activities also distinguishes both extremes from the middle. Persons who share activities are less likely to have low levels than average levels, and more likely to have high than average levels. Finally, education is also predictive of extreme levels. Persons with higher levels of education are less likely to fall in either the low or high categories, and more likely to fall into the average

Table 6-10: Comparison Of Empirical, Lisrel, And Non-Linear Models--Significant Relationships And Direction

Variable	Empirical	Lisrel	Low-Average (1-0)	Average-High (0-1)
GENDER01	+			
GENDER02				
GENDER3A				
INDIVID1				
INDVD2A				
WELLBENG	+	+		
WLBNGSC				+
RELIGSC				
LOCUS				
SELFWTSC				-
MARITALH	+	+	-	+
VIOLENCE	+	+	-	
WHYARGU1				
WHYARGU2				
WHYARGU3		+		
WHYARGU4			-	-
WHYARGU5				+
WHYARGU6				+
WHYARGU7				
PREVSEPR		+		
PROBSEPR			+	+
HOURSWRK				
SAMESCHD				
STERILIZ		+	-	+
ADDCHILD				
LIVEAPRT	-		+	
MARRTROU		-	+	
ALCHDRUG				
FAIRCHOR				
FAIRWORK				
FAIRMONY				
FAIRCHLD				
SHAREACT	+	+	-	+
RSPNDAGE	-	-		-
AGEMARR				
TIMEMARR				
EDUCATCP			-	-
SOCIOSTA				
TOTFAMIN				
ETHNIC				
GENDER				
RELIGION				
SMSA		-		-
REGIONAL				

Table 6-10--Continued

Variable	Empirical	Lisrel	Low-Average (1-0)	Average-High (0-1)
CHILD0_4	+*	-		
CHLD5_18	+*	+	-	
COHAB	+			+
TIMESMAR		+		+
CHRONIC		-	+	
HEALTHST	+	+		
CURREMPL	+			

*VARIABLE CODED DIFFERENTLY IN EMPIRICAL MODEL

category. Since arguing over sex, probability of separation and education operate in the same directions in distinguishing low from average and high from average, this provides support for the assertion that the relationships are nonlinear, and suggests that curvilinear relationships and threshold effects are indeed possible.

Low levels of violence, living separately, feeling that one's marriage is in trouble, having school age children and chronic illness are all predictive of low levels of coital frequency, but are not significant predictors of high levels. On the other hand, well being, self esteem, arguments over having another child and in-laws, age, area of residence, prior cohabitation and previous marriage are all predictive of high levels of coitus, but not of low levels. While the two extremes have some predictors in common, they also have a substantial number of different

predictors. Thus, the answer to the question of whether different variables predict different levels of coitus is yes, at least to some extent.

Substantively, these findings are also important, and cast some light upon findings from the LISREL and OLS models. For example, violence was predictive of higher levels of intercourse in these models. The finding that violence distinguishes those having low coital frequency from those at the mean, but not those having high frequency from the mean, suggests that the relationship is nonlinear, and that the weak positive association between marital coital frequency and violence is a function of its ability to separate low from average frequency. It is reasonable that persons with low levels of violence would have low levels of coitus, and that those exhibiting violence would have higher levels of sexuality given the fact that sexuality and violence are inextricably linked by many in our society.

Arguments over children and inlaws are interesting predictors separating high levels from average levels. Persons who feel uneasy in their marriages, or who are struggling for control in other areas might also struggle for control in the marital bed, thus having higher rates of coitus. The less sure one is of one's self and marriage, the more one might try to affirm him/her self by insisting on coitus. Thus, a positive relationship between arguments

and sex is quite plausible. As Stein (1989) points out, power is an often neglected, yet salient influence upon sexuality.

Finally, self esteem, which was so vital as a motivator in Turner's model, becomes important in distinguishing high levels from average levels. This too, makes sense, since as Turner theorizes, high levels of self esteem are a result of having positive interactions, and positive interactions lead to further interactions, and to even higher levels of self esteem.

When the logistic regression models are compared to the linear model (see Table 6-10), we find that the linear model has thirteen significant predictor variables. Of these, it has seven in common with the logistic regression predicting low coitus, and six in common with the logistic regression predicting high coitus. Only marital happiness, sterilization and shared activity are common to all three models. When the empirical model tested in Chapter Five is included in this comparison, only marital happiness and shared activity are common predictors across all four models. This is further support for the supposition that different variables predict different levels of coital frequency. Since the nonlinear models are sufficiently different from the linear model, we can also conclude that the relationships are nonlinear.

Having demonstrated that different predictors are responsible for different levels of coital frequency, and that the relationships are nonlinear, the next question becomes, how do the findings in this chapter relate back to the empirical literature reviewed earlier? How do these findings relate to the model tested in Chapter Five? And, is the conceptual framework utilized here useful in the study of marital coital frequency? In the next chapter, an attempt is made to answer these questions, to tie together the information presented in the first six chapters, and to suggest directions for future research.

CHAPTER SEVEN
ASSESSMENT AND IMPLICATIONS

The two interrelated goals of the previous chapters have been to replicate and add to existing knowledge of marital sexual interaction, and to determine the characteristics of those who deviate from the average in terms of intercourse rates. In Chapter Two the literature on marital coitus was reviewed, and in Chapter Three these findings were organized under a theoretical sensitizing scheme. Chapter Four contains the methodology for meeting the research goals, and Chapters Five and Six present the results of the data analyses. These findings are meaningless, however, until examined in terms of how well the goals of this project have been met. Thus, the next steps are to compare the results of the current study to earlier empirical findings, to examine the usefulness of the sensitizing scheme employed here, to determine how this study has contributed to the knowledge base, and to point out directions for further research. First, the LISREL model tested in Chapter Five, and the linear model tested in Chapter Six are compared to the empirical literature to determine which similarities and differences exist.

Support for the Existing Empirical Literature

One rather surprising finding is that attitudes have so little to do with coital frequency. In the LISREL model, gender roles and life satisfaction were the only significant predictors of marital coital frequency, while in the linear model only life satisfaction was significant. Of the two, only life satisfaction was a strong predictor. Recall from the review of the empirical literature that gender role orientations, individualism, religiosity, self worth, life satisfaction, well being, and locus of control were all significant predictors of frequency of intercourse in previous studies. One possibility might be that the attitudes measured here are really of two types--gender roles, individualism and religiosity deal more with how persons feel the world should be (ideologies), while well being, life satisfaction, locus of control, and self worth focus on person's actual feelings about themselves and their lives (actualities). Thus one's feelings about one's own situation appear to be more powerful determinants of frequency of intercourse, while one's ideologies have less influence. Life satisfaction, as a global construct, may be capturing person's general feelings about their lives, and these feelings appear to have the most influence upon marital coitus. This is in line with Turner's sensitizing scheme, which suggested that one's attitudes, especially

those involving one's feelings about oneself, were important in motivating persons to interact.

Turning our attention to marital interaction, we find that it strongly affects frequency of coitus. As the empirical literature suggests, stable marriages in which partners are happy and satisfied are likely to have higher rates of coitus. Marital happiness and shared activity especially, were strong predictors of coital frequency in all of the models that were estimated. Having been separated, and feeling that one's marriage was in trouble were predictive in the linear model, thus providing support for assertions in the empirical literature that unhappy marriages, characterized by friction and strain tend to have lower rates of coitus. One puzzling exception was the finding that marital violence is predictive of increased coital rates. This suggests that problems involving physical interaction may be qualitatively different from problems involving only verbal or psychological interaction, and that further research is needed to discover the processes by which violence contributes to increased coital rates.

Arguments over various areas of life such as children, inlaws, and money, had no clear effect upon marital intercourse rates, although as suggested in the last chapter, these may really be tapping into issues such as power and control. Even arguments over sex, which may act

as a surrogate measure for sexual satisfaction, were not significant in predicting coital frequency. This is surprising given the assertion that when the nonsexual parts of a marriage are going badly, sex tends to suffer as well (Blumstein and Schwartz, 1983). Of course, it could be that frequency of arguments is not a good measure of how well a marriage is going. Persons may argue a great deal and yet feel that they have good, satisfying marriages.

Equity, or fairness in areas such as household chores, employment, money and childcare had no effect upon marital coitus, which is surprising given past findings (Hatfield et al., 1982) which point to the contrary. One possibility is that Hatfield's study dealt only with newlyweds, while the focus of this research was much broader.

As expected, couples who lived apart had sex less often than couples living together, which simply means that less opportunity exists for any type of interaction. It was also pointed out in the empirical literature that other contextual factors, such as one's job, might affect coital rates. In this research, neither the number of hours one worked, nor one's work schedule had any impact upon coital rates, suggesting that one's feelings about one's marriage, rather than the context of the marriage, may be a more powerful predictor.

Factors related to future childbirth intentions such as sterilization and plans to add a child to the family were

only mildly predictive. Persons who were sterilized tended to have sex more often according to the linear model, but surprisingly, plans to add a child had no effect on coital rates in any of the models.

With this class of variables, as with the attitudinal variables, overall measures tended to be more predictive than specific measures. For example, with the exception of age, the two variables with the most predictive power were marital happiness and shared activity, both broader measures than variables such as reasons for arguing or feelings of equity. This suggests that the conceptual framework may need to be altered to include several categories of both attitudinal and marital interaction variables, and that any future framework should emphasize global measures of attitudes and interaction over specific measures.

Finally, turning our attention to normative influence variables, we find that age and health status are the best predictors of intercourse rates in both the LISREL and linear models. These findings agree with the empirical literature, and make some sense theoretically as well, since persons in these categories may be constrained by social norms which dictate that they not participate frequently in sexual intercourse. Of course, an equally logical explanation is that many in this category are physically unable to have sex.

Presence of children was predictive of coital frequency in a manner not suggested by the empirical literature. That is, in the LISREL mode, rather than having lowered coital rates, people with children had higher rates. As mentioned earlier, this may be due to the way the variable was coded. In the LISREL model, the variable was simply presence of all children, while in later analyses, this variable was divided into two, one measuring the number of preschool children, the other measuring the number of school-age children. Since having preschool children is negatively related to marital coital frequency, and having school-age children is positively related to marital coital frequency, this suggests that the presence of younger children acts to inhibit one's sexuality, but that this influence decreases as children age. Since couples had more school-age than preschool children, the effect of having school-age children overrode the effect of having preschool children.

As expected from reviewing the empirical literature, income, education, socioeconomic status, and ethnicity were not predictive of coital frequency. In the linear model, rural residence was predictive of increased coital rates, which is directly contrary to the Kinsey (1948) and Trussell and Westoff (1980) studies. The reason for this may be purely demographic. That is, prior to 1980 rural residents may have differed much more from urban residents than they do now. Today, the rural population is much less homogenous

than several years ago when to live in a rural area meant that one was more than likely a farmer.

To summarize, support for the empirical literature is only partial. This may be due to several reasons. First, since this data set is nationwide and current, it may be that findings from previous studies were biased because of sampling problems. Another possibility is that as we move into the 1900's marital interaction is undergoing basic changes, and these changes are reflected here. It is also plausible that because the relationship between marital coitus and its predictors is nonlinear, and because different variables distinguish low and high frequency from the average, that any linear model is misguided. In fact, this may be one reason that previous findings have often conflicted.

Turner's theory was of limited use in organizing the findings from previous empirical research. The results reported here suggest that more categories of variables are needed in the study of marital coitus. Using Turner's framework to organize the empirical findings may have lumped too many dissimilar constructs within the same category. And since Turner's framework dealt with interaction in general, rather than marital interaction in particular, in some cases it was not entirely applicable to the coital frequency literature. On the other hand, Turner's pictorial model (presented in Figure 3-1) proved very useful in

suggesting which classes of variables might affect other classes of variables and ultimately, coital frequency. The excellent fit of the model tested in Chapter Five suggests that even if Turner's scheme is not useful in predicting the effects of individual variables upon coital frequency, it is useful in suggesting relationships between classes of variables, and suggesting where to start in the analysis of marital coital frequency.

Adding to the Knowledge Base: Non-normative Levels of Coital Frequency

The findings presented here suggest that the relationship between coital frequency and its predictors is in fact nonlinear. This has two implications. Empirically, this may explain why there is little consensus over the effects of certain variables on marital coital frequency. Nonlinear methods of analysis may be more appropriate than the linear methods traditionally used. Theoretically, this means that our conceptual frameworks must include explanations of why predictors operate differently at varying levels of coital frequency.

For example, none of the attitudinal variables were useful in predicting which persons would have low levels of coitus, and only well being and self worth were predictive of high coitus rates. Recall that these are not the same variables which were predictive in the LISREL and linear models. Thus the predictors of high levels of intercourse

are not the same predictors as for low levels or for the linear models. This suggests that attitudes may be more important in predicting high levels than for predicting low levels, and that the relationships are nonlinear. The empirical findings reviewed earlier do little in suggesting why this should occur.

When the marital interaction variables are examined, the same pattern emerges. Only marital happiness and shared activity are predictive in all four models. Only marital happiness, arguments over sex, probability of separation, sterilization, and shared activity are predictive of both low and high levels of coitus. This suggests that while low and high levels have some predictors in common, they also differ in many respects. While these findings follow from the empirical literature, this literature does not explain some very important differences.

Interestingly enough, two of the variables, arguments over sex, and probability of separation, operate in the same direction in predicting both high and low levels. That is, increased arguments over sex are predictive of both low and high levels of intercourse. Increased probability of separation operates in the same manner. This suggests that the relationships are nonlinear, and may even be curvilinear, something which previous researchers have failed to take into account.

When the normative influence variables are examined, age becomes insignificant in distinguishing low from average levels of coitus, but is significant in predicting high levels. This is surprising, and indicates that my explanation for the effects of age needs to be rethought. Health, rather than age is the significant predictor of low frequency, while age, rather than health, is the significant predictor of high frequency. It thus appears that one's health determines, more than one's age, whether one will have little or no sex, but for those persons having at least average levels of sex, age becomes more important. Thus, a biological explanation is warranted for those at low levels, and a social explanation for those at high levels.

The question is then, are the effects of age due to biology or due to societal explanations? Stein (1989) is aware of this dilemma. She notes that "...the view that sexuality is concerned solely with the biological and physiological capacities of individuals somehow existing prior to social life continues to dominate the popular imagination" (1989, p. 1). She argues that social constructions of reality, or in other words, societal expectations, have a much greater impact than is currently recognized, and that we need to view sexuality as both a social and biological process. Stein notes that sexuality can not be separated or studied apart from its cultural meanings. She is obviously correct in this case. Age does

cause biological changes, especially increases in chronic illness and a decline in overall health. But, on the other hand, most older adults are in reasonably good health (Starr and Weiner, 1982). Therefore, something other than biology causes the decline in coital frequency with age. As Stein points out, these changes may very well be related to social, not biological factors.

In the model predicting low frequency, only education, having school age children, and chronic health problems are predictive, while in the model predicting high levels, only education, rural residence, cohabitating before marriage, and number of marriages are significant predictors. Only education is predictive of both high and low levels, and even then it predicts both in the same manner. That is, lower education is predictive of both low and high levels of coitus.

In summary then, the current empirical literature is of only limited usefulness in suggesting which variables predict high or low levels. While some variables are predictive in all the models, it appears that many of the relationships are nonlinear. This could help to explain why the findings contained in the empirical literature often conflict. Again, while the sensitizing scheme is useful in suggesting which classes of variables might predict high or low levels, and some of the relationships between them, it

cannot be used to explain why the differences illustrated earlier occur.

Future Directions

This project provides only limited support for past empirical literature. While some of the same variables tend to "drive" all the models, important differences exist. The findings suggest that persons with high or low levels of coitus may be qualitatively different from those with average levels. Current empirical findings have ignored this possibility, and no theories exist to explain these differences. While the current project took a step in the right direction by explicitly organizing past empirical and theoretical literature under a general synthesizing scheme, there is a real need for a conceptual framework dealing specifically with coital frequency, which explains not only predictors at average levels, but why differences exist at the extremes.

Future research must take into account that the relationship between marital coitus and its predictors is in all likelihood nonlinear. Not only must a conceptual framework be developed to explain why these differences occur, but appropriate statistical methods must also be employed. The nonlinear models estimated here were a step in that direction.

Finally, many questions are left unanswered. For example, what about marriages in which partners have ceased to have sexual intercourse? The possibility exists that having no sex at all is qualitatively different from having sex even one time a month. This also raises questions about the happiness and stability of these marriages. It is entirely plausible that substantial numbers of persons have ceased to have sex, and yet have relatively happy, satisfying marriages otherwise.

The relationship between violence and coital frequency also needs to be explored further. Several explanations have been offered for this relationship, yet none is entirely satisfactory. Sex and violence are linked in many ways in this society, and it is possible that a better understanding of this relationship in the marital context would lead to a better understanding of other contexts. The link between violence and marital rape is also one in need of further exploration.

Since age seemed to drive most of the models, its role in predicting marital coital frequency needs to be clarified. We need to examine how age interacts with other variables, and to answer the question of whether age effects are due to normative or biological influences.

Another interesting question that could not be dealt with in this study is that of the comparability of partners reports of coitus. Previous research has shown that men and

women tend to perceive their marriages differently (Bernard, 1972), and that men tend to underreport their coital frequency, while women tend to over report (Greenblat, 1984).

Finally, while the current research focuses on married couples, are the factors predicting coital frequency really that different from those predicting the intercourse rates of cohabitors? Comparisons of this nature would prove interesting.

Conclusion

As pointed out at the beginning of this chapter, the two interrelated goals of this project were to replicate and add to the existing empirical literature on marital sexual interaction, and to examine persons at who deviate from the average in terms of coital frequency. While many questions were raised along the way, these goals have been met. In replicating past studies, some important differences, as well as similarities were found. Probably most importantly, the examination of very high or low levels of coitus led to the discovery that the relationships between some of the predictors and marital intercourse were nonlinear. Thus, the goals of this study have been met, many important discoveries have been made, and many interesting questions suggested.

APPENDIX

PEARSON CORRELATIONS FOR ALL INDEPENDENT VARIABLES

APPENDIX: PEARSON CORRELATIONS FOR ALL INDEPENDENT VARIABLES

	X1	X2	X3	X4	X5	X6	X7	X8
X1. GENDER01	1.00							
X2. GENDER02	.25***	1.00						
X3. GENDER3A	.05***	.12***	1.00					
X4. INDIVID1	.12***	.24***	.13***	1.00				
X5. INDVD2A	-.01	.03	.40***	.03	1.00			
X6. WELLBENG	-.03	-.02	.04*	.02	.08***	1.00		
X7. WELBNGSC	-.04*	.01	.03*	.02	-.03	-.38***	1.00	
X8. RELIGSC	.03	-.09***	-.35***	-.09***	-.16***	-.05**	-.05***	1.00
X9. LOCUS	.09***	.07***	-.14***	.06***	-.24***	-.21***	.14***	.10***
X10. MARITALH	-.03	-.02	.06***	.04*	.10***	.44***	-.18***	-.08***
X11. VIOLENCE	-.01	.01	-.02	-.01	-.03	-.11***	.13***	.01
X12. WHYARGU1	-.04*	.01	-.12***	-.01	-.11***	-.16***	.17***	.08***
X13. WHYARGU2	-.01	.05***	-.08***	.01	-.12***	-.22***	.23***	.04*
X14. WHYARGU3	.01	.03	-.02	-.02	-.06***	-.15***	.21***	.03*
X15. WHYARGU4	-.02	.04*	-.05***	-.01	-.09***	-.14***	.16***	.05***

APPENDIX--Continued

	X1	X2	X3	X4	X5	X6	X7	X8
X16. WHYARGU5	-.03	.03	-.04*	.01	-.04**	-.06***	.11***	.01
X17. WHYARGU6	-.02	.02	-.08***	-.02	-.11***	-.11***	.13***	.04*
X18. WHYARGU7	-.01	.02	-.01	.02	-.09***	-.15***	.15***	.04*
X19. PREVSEPR	-.02	.02	-.02	-.01	-.05***	-.11***	.11***	-.01
X20. PROBSEPR	.02	.01	-.11***	-.04**	-.13***	.27***	.17***	.08***
X21. HOURSWRK	.04*	.04*	-.02	-.04*	.04*	-.01	-.04*	.07***
X22. SAMESCHD	.01	-.02	-.01	.02	-.01	-.04	.06***	.02
X23. STERILIZ	.01	-.01	.07***	.04	-.02	-.04	.03	-.06**
X24. ADDCHILD	.01	-.01	-.01	.01	.05	.10***	-.03	.01
X25. LIVEAPRT	-.01	-.02	.02	.01	.02	.05***	-.03	-.01
X26. MARRTROU	-.03	-.01	-.10***	-.05***	-.13***	-.25***	.18***	.10***
X27. ALCHDRUG	.01	-.01	-.03	-.01	-.03*	-.11***	.09***	.06***
X28. FAIRCHOR	.08***	.05**	.03	.01	.08***	.07***	-.08***	.05***
X29. FAIRWORK	.01	.01	-.03	-.01	.01	.05***	-.05***	.02
X30. FAIRMONY	.02	-.01	-.02	.01	.03	.08***	-.06***	.01

APPENDIX--Continued

	X1	X2	X3	X4	X5	X6	X7	X8
X31. FAIRCHLD	.03*	-.05***	-.09***	.04*	-.11***	-.03	.01	.04*
X32. SHAREACT	-.01	-.03*	.05**	-.01	.08***	.23***	-.17***	-.02
X33. RSPNDAGE	.02	-.02	.29***	.03	.26***	.03	-.03*	-.11***
X34. AGEMARR	-.02	.02	.03	-.02	.08***	.01	-.02	.04*
X35. TIMEMARR	.03*	-.03*	.27***	.04*	.22***	.03	-.03	-.13***
X36. EDUCATCP	-.04*	-.10***	-.29***	-.08***	-.14***	.04*	-.15***	.31***
X37. SOCIOSTA	-.04	-.12***	-.21***	-.10***	-.06**	.03	-.11***	.24***
X38. TOTFAMIN	.03	.02	.05***	.03*	.01	-.01	.01	-.03
X39. ETHNIC	.02	.10***	.06***	-.01	.07***	-.01	-.01	.06***
X40. GENDERXX	.08***	.12***	.09***	.03	.18***	.01	-.11***	.08***
X41. RELIGON1	.02	.01	.08***	.04**	.08***	.03	-.02	-.29***
X42. SMSA_NOT	-.02	-.01	-.06***	-.03	-.05***	.01	-.01	.13***
X43. REGIONAL	-.01	.05***	.05**	.01	.06***	-.02	.02	-.09***
X44. CHILD0_4	-.02	.02	-.06***	.01	-.10***	-.01	.01	.04*
X45. CHLD5_18	.02	.06***	-.03	.05***	-.08***	-.04*	.02	.01

APPENDIX--Continued

	X1	X2	X3	X4	X5	X6	X7	X8
X46. COHAB	-.03*	-.04*	-.16***	-.06***	-.11***	-.04*	.06***	.16***
X47. TIMESMAR	-.01	.01	.01	-.01	.01	-.01	.05***	-.01
X48. PREGNANT	.03	-.01	.06	-.02	.05	.01	.02	.01
X49. CHRONIC	.02	-.01	.06***	.01	.04**	-.11***	.15***	-.03
X50. HEALTHST	-.01	-.06***	-.14***	-.05**	-.09***	.21***	-.26***	.10***
X51. CURREMPL	-.04*	-.02	.22***	.01	.12***	-.01	.11***	-.16***
X52. SELFWTSC	.22***	.24***	-.01	.19***	-.11***	-.25***	.21***	.05**
MEAN	1.84	1.81	3.46	2.28	3.56	5.56	12.57	8.48
S.D.	.79	.90	1.25	1.06	1.13	1.30	15.99	3.23

*SIGNIFICANT AT .01 LEVEL
**SIGNIFCANT AT .001 LEVEL
***SIGNIFICANT AT .0001 LEVEL

APPENDIX--Continued

	X9	X10	X11	X12	X13	X14	X15	X16
X9. LOCUS	1.00							
X10. MARITALH	-.19***	1.00						
X11. VIOLENCE	.04**	-.14***	1.00					
X12. WHYARGU1	.12***	-.25***	.16***	1.00				
X13. WHYARGU2	.14***	-.28***	.21***	.55***	1.00			
X14. WHYARGU3	.10***	-.21***	.16***	.38***	.43***	1.00		
X15. WHYARGU4	.09***	-.20***	.16***	.37***	.40***	.55***	1.00	
X16. WHYARGU5	.02	-.04**	.13***	.20***	.21***	.19***	.23***	1.00
X17. WHYARGU6	.09***	-.12***	.14***	.24***	.29***	.27***	.27***	.22***
X18. WHYARGU7	.09***	-.20***	.12***	.31***	.34***	.31***	.27***	.11***
X19. PREVSEPR	.07***	-.18***	.15***	.12***	.20***	.12***	.11***	.05**
X20. PROBSEPR	.17***	-.43***	.19***	.27***	.33***	.24***	.27***	.14***
X21. HOURSWRK	-.02	-.04*	-.03	.07***	.02	.08***	.05*	.03
X22. SAMESCHD	.03	-.03	.04	.03	.01	.03	.02	.02
X23. STERILIZ	.05*	-.03	-.03	-.03	.01	-.02	-.02	-.17***
X24. ADDCHILD	-.03	.12***	.01	-.02	.01	-.04	-.02	.10***

APPENDIX--Continued

	X9	X10	X11	X12	X13	X14	X15	X16
X25. LIVEAPRT	-.03	.06***	-.01	.01	-.01	-.01	-.01	-.05***
X26. MARRTROU	.15***	-.37***	.29***	.30***	.35***	.25***	.28***	.10***
X27. ALCHDRUG	.09***	-.14***	.18***	.12***	.15***	.10***	.07***	.02
X28. FAIRCHOR	-.03*	.14***	-.04*	-.09***	-.10***	-.06***	-.02	.01
X29. FAIRWORK	-.01	.08***	-.03	-.06***	-.04*	-.04*	-.03	-.02
X30. FAIRMONY	-.03	.12***	-.05***	-.09***	-.13***	-.05***	-.07***	-.01
X31. FAIRCHLD	.04**	-.06***	.01	.16***	.17***	.08***	.12***	.06***
X32. SHAREACT	-.15***	.30***	-.07***	-.21***	-.26***	-.20***	-.18***	-.08***
X33. RSPNDAGE	-.08***	.07***	-.10***	-.30***	-.33***	-.19***	-.24***	-.19***
X34. AGEMARR	.02	.01	-.01	-.08***	-.10***	-.06***	-.06***	-.03*
X35. TIMEMARR	-.10***	.07***	-.09***	-.26***	-.28***	-.17***	-.22***	-.18***
X36. EDUCATCP	.01	-.03*	-.02	.11***	.06***	.01	.04**	.01
X37. SOCIOSTA	-.05**	-.01	-.05**	.03	-.05*	-.07***	-.06***	-.04
X38. TOTFAMIN	.01	.01	-.01	-.07***	-.06***	-.02	-.06***	-.03
X39. ETHNIC	-.02	.04*	-.03	-.02	-.03	-.01	.01	-.01
X40. GENDERXX	-.03*	.01	-.04**	-.01	-.03*	.02	.04*	.02

APPENDIX--Continued

	X9	X10	X11	X12	X13	X14	X15	X16
X41. RELIGON1	-.03	.03	-.02	-.04**	-.03*	-.02	-.03*	-.04*
X42. SMSA_NOT	.01	-.01	.01	.04*	.03	.01	.02	.01
X43. REGIONAL	-.02	.01	.01	-.01	.01	.01	.02	.02
X44. CHILD0_4	.02	-.03	.03	.18***	.16***	.13***	.13***	.10***
X45. CHLD5_18	.06***	-.07***	-.01	.11***	.14***	.07***	.09***	-.01
X46. COHAB	.07***	-.05***	.08***	.14***	.15***	.10***	.11***	.11***
X47. TIMESMAR	.07***	-.02	.01	-.03	-.01	-.01	-.02	-.01
X48. PREGNANT	-.03	.01	.04	-.01	-.01	-.02	-.02	-.05
X49. CHRONIC	.03*	-.01	.01	-.02	-.02	-.01	-.04*	-.03
X50. HEALTHST	-.09***	.08***	-.04*	-.01	-.02	-.05**	.01	.01
X51. CURREMPL	-.06***	.07***	-.02	-.15***	-.13***	-.07***	-.12***	-.05***
X52. SELFWTSC	.37***	.17***	.06***	.10***	.11***	.10***	.10***	.01
MEAN	2.30	5.92	.07	1.91	1.95	1.93	1.66	1.14
S.D.	.97	1.43	.27	1.07	1.15	1.35	1.10	.59

*SIGNIFICANT AT .01 LEVEL
**SIGNIFCANT AT .001 LEVEL
***SIGNIFICANT AT .0001 LEVEL

APPENDIX--Continued

	X17	X18	X19	X20	X21	X22	X23	X24
X17. WHYARGU6	1.00							
X18. WHYARGU7	.22***	1.00						
X19. PREVSEPR	.09***	.11***	1.00					
X20. PROBSEPR	.18***	.18***	.24***	1.00				
X21. HOURSWRK	.03	.01	.01	.06***	1.00			
X22. SAMESCHD	.04*	.03	.01	.04	-.03	1.00		
X23. STERILIZ	-.04	.23***	.07***	.02	.01	-.01	1.00	
X24. ADDCHILD	.06*	-.27***	-.04	-.08***	-.02	-.01	.00	1.00
X25. LIVEAPRT	-.05**	.03	-.03*	-.05**	.01	-.02	.02	-.04
X26. MARRTROU	.22***	.22***	.23***	.46***	.03	.04*	.01	-.04
X27. ALCHDRUG	.05***	.14***	.12***	.15***	-.04	.03	.03	-.02
X28. FAIRCHOR	-.01	-.07***	-.06***	-.11***	.16***	.03	.02	.03
X29. FAIRWORK	-.02	-.06***	-.04*	-.08***	-.02	.01	-.01	.03
X30. FAIRMONY	-.04	-.06***	-.06***	-.11***	-.01	.01	-.03	.04
X31. FAIRCHLD	.11***	.40***	.05***	.09***	.09***	.01	.21***	-.25***
X32. SHAREACT	-.12***	-.25***	-.14***	-.30***	-.09***	-.02	-.07***	.15***

APPENDIX--Continued

	X17	X18	X19	X20	X21	X22	X23	X24
X33. RSPNDAGE	-.28***	-.13***	-.12***	-.21***	-.11***	-.02	.33***	-.43***
X34. AGEMARR	-.08***	-.08***	-.08***	-.01	.02	-.01	-.03	-.01
X35. TIMEMARR	-.24***	-.09***	-.08***	-.21***	-.12***	-.02	.38***	-.49***
X36. EDUCATCP	.07***	.06***	-.02	.02	.03	.03	-.10***	.04
X37. SOCIOSTA	.01	.01	-.06***	-.05*	.04	-.01	-.05*	.01
X38. TOTFAMIN	-.05**	-.02	-.01	-.03	-.03	.02	-.02	-.01
X39. ETHNIC	.01	.01	-.03*	-.04**	-.01	-.03	-.03	.06*
X40. GENDERXX	.01	-.06***	-.02	.01	.33***	.01	.01	-.01
X41. RELIGON1	-.02	-.03*	.01	-.03*	-.03	.04	.05**	-.05*
X42. SMSA_NOT	-.01	-.01	.02	.01	-.02	-.03	-.09***	.04
X43. REGIONAL	-.03	-.01	.04**	.02	.03	.04*	.04*	-.02
X44. CHILD0_4	.15***	.19***	.02	.05**	.01	.02	-.12***	-.04
X45. CHLD5_18	.06***	.32***	.09***	.09***	.04*	.02	.42***	-.42***
X46. COHAB	.10***	.04*	.09***	.16***	.07***	.01	-.04*	.07**
X47. TIMESMAR	-.04*	.04*	.01	.06***	.02	.04*	.14***	-.05
X48. PREGNANT	.01	.02	-.05	-.01	.02	-.02	.00	.00

APPENDIX--Continued

	X17	X18	X19	X20	X21	X22	X23	X24
X49. CHRONIC	-.04*	-.02	.02	-.03	-.06**	.01	.04	-.06*
X50. HEALTHST	.03	-.01	-.01	-.04*	.05**	-.02	-.07***	.05
X51. CURREMPL	-.08***	-.08***	-.03*	-.11***	-.39***	-.01	-.02	-.02
X52. SELFWTSC	.05***	.09***	.05**	.16***	-.01	.03	.04*	-.03
MEAN	1.43	1.76	.08	1.35	36.95	.57	.31	.62
S.D.	.88	1.34	.29	.75	16.13	.45	.34	.30

*SIGNIFICANT AT .01 LEVEL
**SIGNIFCANT AT .001 LEVEL
***SIGNIFICANT AT .0001 LEVEL

APPENDIX--Continued

	X25	X26	X27	X28	X29	X30	X31	X32
X25. LIVEAPRT	1.00							
X26. MARRTROU	-.03	1.00						
X27. ALCHDRUG	.01	.20***	1.00					
X28. FAIRCHOR	.01	-.10***	-.03	1.00				
X29. FAIRWORK	.01	-.03	-.04*	.18***	1.00			
X30. FAIRMONY	.01	-.10***	-.06***	.24***	.35***	1.00		
X31. FAIRCHLD	-.01	.09***	.04*	.09***	.06***	.06***	1.00	
X32. SHAREACT	.13***	-.27***	-.10***	.09***	.06***	.09***	-.29***	1.00
X33. RSPNDAGE	.04*	-.22***	-.03*	.04*	-.03	.01	-.45***	.26***
X34. AGEMARR	.01	-.02	.03*	.06***	-.01	-.02	-.16***	.08***
X35. TIMEMARR	.04*	-.21***	-.05***	.01	-.03	.03	-.37***	.22***
X36. EDUCATCP	.03*	.08***	.02	.05***	.03	.04*	.10***	.01
X37. SOCIOSTA	.04*	.04	-.01	.04*	.03	.04*	.01	.08***
X38. TOTFAMIN	-.03	-.01	.04*	-.04*	-.02	-.01	-.05**	.04**
X39. ETHNIC	-.05***	-.02	-.02	.01	.01	.01	.03*	-.01
X40. GENDERXX	-.01	-.05**	-.03	.39***	.04**	.02	.05***	.01

APPENDIX--Continued

	X25	X26	X27	X28	X29	X30	X31	X32
X41. RELIGON1	.05***	-.04*	-.01	-.03*	-.02	-.01	-.06***	.03
X42. SMSA_NOT	-.01	.02	.03	.02	.01	.03*	.02	-.01
X43. REGIONAL	-.02	.04*	.02	.03	.03*	.01	-.01	-.01
X44. CHILD0_4	.01	.09***	-.01	-.02	.02	-.01	.37***	-.20***
X45. CHLD5_18	.04**	.09***	.03	-.01	-.01	-.02	.50***	-.22***
X46. COHAB	-.04*	.17***	.10***	-.01	.01	-.03	.09***	-.10***
X47. TIMESMAR	-.01	.05**	.08***	.01	.01	-.02	-.04**	.01
X48. PREGNANT	.05	-.02	.03	.01	-.01	.02	.04	.01
X49. CHRONIC	-.01	-.02	.02	.01	-.03	-.01	-.11***	.07***
X50. HEALTHST	.01	-.02	-.05**	-.02	-.01	.02	.09***	.01
X51. CURREMPL	-.01	-.10***	-.03	-.07***	.04*	.01	-.23***	.11***
X52. SELFWTSC	-.02	.11***	.07***	-.03	-.01	-.04*	.03	-.13***
MEAN	.99	.22	.06	2.95	3.00	2.96	1.89	4.92
S.D.	.10	.44	.24	.72	.54	.49	1.54	1.51

*SIGNIFICANT AT .01 LEVEL
**SIGNIFCANT AT .001 LEVEL
***SIGNIFICANT AT .0001 LEVEL

APPENDIX--Continued

	X33	X34	X35	X36	X37	X38	X39	X40
X33. RSPNDAGE	1.00							
X34. AGEMARR	.30***	1.00						
X35. TIMEMARR	.86***	-.23***	1.00					
X36. EDUCATCP	-.21***	.02	-.22***	1.00				
X37. SOCIOSTA	.05*	.07***	.01	.58***	1.00			
X38. TOTFAMIN	.15***	.01	.15***	-.06***	-.02	1.00		
X39. ETHNIC	-.07***	-.04*	-.05***	-.06***	-.02	-.03	1.00	
X40. GENDERXX	.10***	.17***	.01	.03*	-.01	-.05***	-.02	1.00
X41. RELIGON1	.08***	-.01	.08***	.01	-.01	-.01	-.21***	-.05***
X42. SMSA_NOT	-.04*	.05***	-.06***	.14***	.14***	.02	.07***	-.01
X43. REGIONAL	-.03	.01	-.03*	-.04*	-.02	-.06***	.08***	.02
X44. CHILD0_4	-.45***	-.08***	-.41***	.10***	.01	-.09***	.05***	-.02
X45. CHLD5_18	-.31***	-.13***	-.25***	.04**	-.04*	-.08***	.05***	-.01
X46. COHAB	-.31***	.19***	-.42***	.05***	-.03	-.08***	-.02	.01
X47. TIMESMAR	.09***	.60***	-.23***	-.07***	-.03	-.01	-.05***	.03
X48. PREGNANT	.02	.01	.03	-.02	.02	-.01	.01	-.01

APPENDIX--Continued

	X33	X34	X35	X36	X37	X38	X39	X40
X49. CHRONIC	.18***	.07***	.14***	-.09***	-.01	.05***	-.02	-.01
X50. HEALTHST	-.20***	-.06***	-.16***	.27***	.13***	-.05***	-.01	.01
X51. CURREMPL	.41***	.05***	.39***	-.26***	-.03	.07***	.01	-.20***
X52. SELFWTSC	.01	-.01	.01	-.13***	-.13***	.01	-.01	.01
MEAN	44.37	25.14	19.20	12.79	41.58	43305	.14	.50
S.D.	16.30	8.71	15.83	3.17	17.69	50903	.36	.54

*SIGNIFICANT AT .01 LEVEL
**SIGNIFCANT AT .001 LEVEL
***SIGNIFICANT AT .0001 LEVEL

APPENDIX--Continued

	X41	X42	X43	X44	X45	X46	X47	X48
X41. RELIGON1	1.00							
X42. SMSA_NOT	-.13***	1.00						
X43. REGIONAL	.16***	-.11***	1.00					
X44. CHILD0_4	-.04**	.02	.02	1.00				
X45. CHLD5_18	-.03*	-.01	.03	.01	1.00			
X46. COHAB	-.10***	.05***	.02	.18***	.02	1.00		
X47. TIMESMAR	.04**	-.01	.08***	-.06***	-.02	.27	1.00	
X48. PREGNANT	-.01	-.01	.04	.02	.05	-.02	-.04	1.00
X49. CHRONIC	.01	-.02	.01	-.09***	-.07***	-.02	.07***	-.05
X50. HEALTHST	.01	.06***	-.03	.09***	.07***	.01	-.09***	-.02
X51. CURREMPL	.06***	-.05***	.02	-.06***	-.16***	-.13***	.01	.06
X52. SELFWTSC	-.01	-.03	.01	-.01	.03	.01	.02	-.01
MEAN	.29	.76	2.54	.31	.75	.22	1.25	.11
S.D.	.49	.46	1.09	.66	1.16	.44	.58	.15

*SIGNIFICANT AT .01 LEVEL
**SIGNIFCANT AT .001 LEVEL
***SIGNIFICANT AT .0001 LEVEL

APPENDIX--Continued

	X49	X50	X51	X52
X49. CHRONIC	1.00			
X50. HEALTHST	-.23***	1.00		
X51. CURREMPL	.17***	-.21***	1.00	
X52. SELFWTSC	.10***	-.21***	.06***	1.00
MEAN	.07	4.05	.68	5.60
S.D.	.27	.88	.50	1.78

*SIGNIFICANT AT .01 LEVEL
**SIGNIFCANT AT .001 LEVEL
***SIGNIFICANT AT .0001 LEVEL

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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